

**AN OPEN CLINICAL STUDY OF SIDDHA
DRUGS“*THIRUTHARAKCHATHA CHOORANAM*” (INTERNAL)
AND “*ARUGANVER THYLAM* (EXTERNAL) IN THE
TREATMENT OF “*VIYAGULAUNMATHAM*” (DEPRESSION)**



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(*Siddha*)**

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‘மறுப்ப துடல்நோய் மருந்தென லாகும்

மறுப்ப துளநோய் மருந்தெனச்சாலும்

மறுப்ப தினிநோய் வார திருக்க

மறுப்பது சாவையு மருந்தென லாமே’

- திருமந்திரம்

In the view of *Siddhar Thirumoolar* definition of medicine, that one who ensures ailments of physical, mental, preventive and also postpone the death. Siddha system of medicine is a unique traditional system of medicine in the world. It is also called *Tamil Maruthuvam* and commonly followed by Tamil people since time immemorial. According to Siddha system of medicine, perfect health is maintained by three *uyirthathukkal* (humours) namely *Vaatham*, *Pitham*, *Kabam*. Whenever there is derangement in these three *uyirthathukkal*, the resultant will be diseases. The salvation is the ultimate aim of *Siddhars*, so they are maintained their health physically and mentally.

Siddha system has the wonderful principle which is *Panchapootham* theory. According to *Panchapootham* theory the universe and the human body both are formed by five elements i.e. Space, Air, Fire, Water, and Earth. Likewise, the diseases and the medicines are also based on the *Panchapootham* theory. Siddhars believed in the concept that a healthy soul can developed only from a healthy body. So, they developed methods and medications to strengthen their physical body and thereby their souls.

Siddhars have listed the diseases of mankind as 4448 based on the *Mukkutram* i.e., *Vali*, *Azhal*, *Iyyam*. Among the 4448 diseases, the Psychological related diseases are classified into 18 varieties by *Siddhar Agasthiyar*. The other imperative *Siddhars Yugi Munivar* and *Theraiyar* have also described the psychiatric diseases in their texts.

The dissertation topic chosen by me *Viyagula Unmatham* which mostly correlated with the symptoms of Depression in Modern science.

“மனநலம் மனுவிற்கு காக்கம் இனநலம்

எல்லா புகழும் தரும்

-திருக்குறள்.

Depression is a common mental disorder, characterised by sadness, loss of interest or pleasure, feeling guilt or low self-esteem, disturbed sleep, appetite, lethargy and poor concentration. A depressive disorder is a syndrome that reflects a sad and irritable mood exceeding normal sadness or grief. More specifically, the sadness mentality is characterized by a greater intensity, duration with severe symptoms and functional disabilities than normal.

In this condition, anxiety and depression due to lack of courage, sorrow, grief, paleness, loss of wealth and crying with tears are the symptoms of the diseases.

Depressive disorders are a huge public-health problem, due to its affecting millions of people. About 10% of adults up to 8% of teens and 2% of preteen children experience some kind of depressive disorder.

Ref: <http://www.medicinenet.com/depression/article.htm>

It is the most common psychiatric disorder; its life time prevalence is 17%. It is twice as prevalent in women as in men and the mean age of onset is around 40 years. It is commonly in divorced and separated persons.

Depression is also responsible for maximum DAILYs (disability adjusted life years) amongst all the psychiatric disorders. It is also the most common cause of suicide.

Ref: [Review of psychiatry praveen Tripathi](#)

A large population-based study from India to report on prevalence of depression and shows that among urban south Indians, the prevalence of depression was 15.1%. Age, female gender and lower socio-economic status are some of the factors associated with depression in this population. The overall prevalence of depression was 15.1% (age-adjusted, 15.9%) and was higher in females (females 16.3% vs. males 13.9%, $p < 0.0001$). The odds ratio (OR) for depression in female subjects was 1.20 [Confidence Intervals (CI): 1.12–1.28, $p < 0.001$] compared to male subjects. Depressed mood was the most common symptom (30.8%), followed by tiredness (30.0%) while more severe symptoms such as suicidal thoughts (12.4%) and speech and motor retardation (12.4%) were less common.

Ref: <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0007185>

Yogam is a complete science of health, which deals with understanding of adequate functioning of all systems of the body and appropriate coordination between them, along with healthy functioning of our mind. The practice of *yogam* integrated the body with the mind and mind with the soul. *Yogam* prevents one from physical, mental and emotional imbalances due to various reasons in our day to day life. *Yogam* has the capacity to free the body from most of the diseases, it not only operates on the physical level but also had great benefits on mental worries and tensions. The *Pranayamam* helps to reduce the intensity of mental stress.

Every month, about 30-40 patients report to OPD of Ayothidoss Pandithar Hospital, National Institute of Siddha, Tambaram sanatorium, Chennai-47.

Even though there are vast collection of medicines in *Siddha* to treat the *Mana noigal* but there is very minimum number of research has been carried out on depression. So, the author chosen *Thirutharakchatha chooranam* internally and *Aruganver thylam* externally, the ingredients are perfect combination for to treat *Viyagula unmatham*, cost effective and easily can be prepared too. *Yogam* therapy is indicated for *udal* and *ulanoigal*. Hence the *Yogam* therapy also included in the study.

AIM AND OBJECTIVES

AIM:

To comparative clinical study of *THIRUTHARAKCHATHA CHOORANAM* (internally) and *ARUGAN VER THYLAM* (externally) with and without *yogam* therapy.

OBJECTIVE:

- To make a detailed clinical evaluation of the disease by careful examination of etiology, symptoms, complication, treatment and Prognosis
- To study the Siddha and Modern aspects of *Viyagula unmatham* (Depression)
- To study the Siddha basic principles towards the efficacy of trial medicines.
- To carry out the Biochemical analysis of trial medicine *THIRUTHARAKCHATHA CHOORANAM*
- To analyse the therapeutical efficacy of trial medicine (internal medicine) of *THIRUTHARAKCHATHA CHOORANAM* for depression.

In Siddha system, all psychiatric diseases are coming under the *kirigai noigal*. *Kirigai maruthuvam*, the psychiatry in Siddha system of medicine is propounded by several Siddhars of whom the most renowned are *AGATHIYAR*, *YUGIMUNIVAR* and *THERAIYAR*. Their descriptions are phenomenological. In Siddha system, the physiology of human body is dealt in 96 *thatthuvangal* (philosophy). Of the 96 *thatthuvam*, *Manam* (mind), *Buththi* (wisdom, decision making), *Chittham*(determination), *Agangaram* (accomplishment) are the responsible for the mental well-being. *Agangaram* is the innate character of *manam*. *Manam*(mind) is responsible for thinking, reasoning, planning and self-realization.

The mind and physique are inseparable and inter dependable. *Manam* is both receptive and executive. In-appropriate food, seasonal variations, somatic diseases, and drug abuse are some of the factors that influence the mind. This stimulates the three humours *vali*, *azhal* and *iyam*, especially deranges *vali* or *azhal* or often the predominance of *azhal* humour over the other two, thereby manifest *mana noigal* (mental disorders). *Agathiyar maanidar kirigai nool* and *yugi chinthamani-800* are noteworthy psychiatric literature in Siddha system. They classified the clinical variety of mental illness, based on symptomatology. It's absolutely correlates with modern psychiatric illness like depression, schizopernia, mania, convulsive disorders, neurotic illness, drug dependence and toxic psychosis etc.

VIYAGULA UNMATHAM(DEPRESSION):

Viyagula unmatham is a type of unmatham which is a psychiatric disease described in the texts of “*Sirappu marythuvam*” by Dr.R. Thiyagarajan and “*Siddha Maruthuvam Pothu*” by K. N. Kuppusami Muthaliyar and also “*Noi Naadal Noi Muthal Naadal Thiraddu - Part - 2*” by Dr. M. Shanmugavelu.)

UNMATHAM (DEFECTED NORMAL MENTAL STATE):

Other name: *veri noi, pithu noi, paithiya noi ,pitha noi, unmatham.*

It is a psychic disorder, develops as changed normal mental state due to the vitiation of three humours viz *vatham*, *pitham* and *kapham*. Changed mental state, loss of intelligence, articulation defect, dancing, singing, continuous working mania, quarrelling and beating.

Murkurigal:

- Reduced mental function
- Excessive anger.
- Mood swings.
- Low pitched or high-pitched voice.
- Lethargy.
- Blabbering and whispering always.
- Abnormal behaviour.

Noi varum vazhi:

The disease occurs due to destruction physical and mental factors of the body. The reasons for this are,

- Increased intake of food,
- Excessive starvation,
- Drug abuse,
- Increased desires,
- Frighten,
- Frequent agitation.

Hence the disease can occur in association with vadha disease like *pakkavatham*, *valipu noi*, its also seen in persons those who were undergoing ailments for long time and also in postpartum ladies whose health is severely affected.

The disease can also occur due to wrong practice of yogam during the *thuriya avaththai* state. Since this disease occurs due to deranged *azhal kutram(piththam)*, is called *paithiya noi*. The persons whose mental state is disturbed and who keeps on blabbering whatever he likes they are commonly called as *paithiyam*.

TYPES OF UNMATHAM:

Unmatham classified into 6 types,

- ***Vatha Unmatham:***

Affected mental state, articulation defect, dancing, singing, quarrelling and beating are the general symptoms of vatha unmatham.

- ***Pitha unmatham:***

Frightening others, abnormal body movements, interested in cold items.

- ***Kapha unmatham:***

Insomnia, frightening others, sexual indulgence, self-centeredness, possessiveness.

- ***Mukkuttra unmatham:***

The mixed signs and symptoms of *vatham*, *pitham* and *kapham* unmatham is called mukkuttra unmatham.

- ***Viyagula unmatham:***

Anxiety and depression due to bereavement, sorrow and grief, paleness, loss of wealth and weeping are the symptoms of this disease.

- ***Nanju unmatham:***

Toxicity of metals and others, which affects the brain, drug abuse, tiredness of extremities, sensory organs, blackish discoloration of the body, general debility, weakness of the body and perplexity are the symptoms of these diseases.

COMMON SYMPTOMS:

- Mental instability,
- Restlessness,
- Loss of control,
- Confined thoughts,
- Speaking loudly,
- Sleeplessness,
- Blabbering,
- Slurred speech,
- Lack of interest,
- Loss of strength.

AETIOLOGY:

In the text of *agathiyar kirisa nithana nool*,

“வாறான பெரியோர்கள் சாபத்தாலும்

வயற் றெரிந்து தந்தைதாய் சாபத்தாலும்

பேறான கற்புடையாள் சாபத்தாலும்

பேர் பெரிய மன்னர் பொருள் கவர்ந்த பாவம்
 கூறான ஆலயங்கழித்த பாவம்
 கொடிதான சிவ பொருளைக் கவர்ந்த பாவம்
 ஆறான குளங்கி ணறு அழித்த பாவம்
 அஞ்சாமல் மாதர் கெற்பமழித்த பாவம்
 அளிவளக்கு சத்தியங்கள் செய்த பாவம்
 அரளி முதல் நல்ல மரம் முறித்த பாவம்
 வளி மறைத்த சாலை மரம் தறித்த பாவம்
 வாய் மதத்தால் பெரியோரை பழித்த பாவம்
 வழி பாவம் சிசுக்களையும் கொன்ற பாவம்
 பஞ்சமாம் பாதகங்கள் செய்த பாவம்
 தெளிவான குருசாபம் ஜென்மந் தோறும்
 ஜெனித்த முதல் மரிக்கும் வரை பிடிக்கும் பாரே!

In the text book of *yugi maa munivar vaiththiya sinhthamani* 800,

“மருவுமே புளிப்புறைப் புவர்ப்பு மிஞ்சல்
 மனதிலே துக்கங்க ளடைதலாலும்
 நெருவுமே நெருப்புவெயில் கோபந் தன்னில்
 நித்திரைதா நில்லாமல் விழித்திருத்தல்
 அருவுமே யக்கினியிற் பொசிக்கா துண்ட
 லதிகமாய்ப் பெண்போக மனுப வித்தல்
 நருவுமே நாபிக்கு மேலே நின்று
 ணாடியே கண்டமட்டா யிருக்கும் பாரே”

Vigara pitham:

“சொல்லவே துயிலொழிந்து கசந்து வாயைத்
 துப்புரவாய்ப் பலபேச்சும் விரும்பி டாது
 கல்லவே கண் சிவந்து முண்டாங்
 கடுத்துடம் பெலாம்வெளுத்துக் கருகிப்போகும்
 மல்லவே வாந்தியோடு மயக்க மாகு
 மனமருக லாகியே வாய்நீ றுறும்”
 பல்லவே பட்னிதான் மிக விருக்கும்
 பாரமாம் விகாரபித்தப் பண்ப தாமே”

-(பூகிமுனி வைத்திய சிந்தாமணி சிந்தாமணி 800

- Sleeplessness,
- Bitter taste in mouth,
- Hatredness,
- Redness of eyes,
- Pallor of body with body pain,
- Vomiting,
- Giddiness,
- Lack of vigilance,
- Dribbling of saliva.

Unmaatha pitham

“விவரமாய் மேனியெலா மிடுக்குண் டாகு
 மிக்கான தீபனந்தான் மெத்த வாகுந்
 தபரமாய்த் தலைதானுங் கனத்துக் காணுந்
 தரிக்குமோ ரிடந்தன்னில் மிகவி ருக்கும்
 உபரமா யொருவருடன் பேசி டாம
 திபரமாய் வாய்நீர்தான் வடித்து நிற்குஞ்
 சித்தமது கலங்குமுன் மாத மாமே”

-(யுகிமுனி வைத்திய சிந்தாமணி சிந்தாமணி800)

- Generalised weakness,
- Increase appetite,
- Heaviness of head,
- Stillness,
- Mute,
- Sleeplessness,
- Dribbling of saliva,
- Discomfort in Chest.

Uratha pitham

“மூர்க்கமாங் கோபமது மிகவுண் டாகு
 முனையாக வடிக்கடிக்குச் சண்டை கொள்ளும்
 ஆர்க்கமாய்க் கூவியே விரைச்ச லாகு
 மாதான பாதாளம் பேதி யாகும்

நார்க்கமாய் நன்மைதுன்மை தோன்றா மற்றான்
நலக்கமாக் கண்சிவக்குந் தூக்க மில்லை
ஊர்க்கமா யுடம்புதூ லிக்கு முப்பு
முரத்தபித்த வாதத்தி லுண்மை தானே”

-(யூகிமுனி வைத்திய சிந்தாமணி சிந்தாமணி800)

- Increased anger,
- Quarrelling,
- Flatulence,
- Lack of intelligence,
- Redness of eyes,
- Sleeplessness,
- Weight gaining.

MUKKUTRA VERUPAADU:

“முற்றுமீக் குணங்கண்டால் முயிறதன் முட்டைதன்னை
கத்தப்பபாலினோடுங் கலந்தருந்திதமாம் பின்பு
பித்தந்தானையத்தோடு பெருமுகந்திரும்பநிற்கில்
.....”

- (அகத்தியர் குணவாகடம்)

Due to food and activities of *azhal kutram* vitiated from its normal level and affects 7 physical constituents one by one that leads to emaciation of the body with mental abnormalities.

NAADI NADAI:

“உறுதியுள்ள பித்தமது தோன்றில்
மறதியுடன் பைத்திய ரோகம்.....”

- (சதக நாடி)

“பித்தமே கதித்தபோது பிதற்றிடும் பித்த கெளு
பிறந்திடும் பித்த நாடி பிரண்டுமே நிற்கு மாகில்
வறண்டிடு மூலாதாரம் வாதையால் முடிவு செய்யும்
கறண்டது பித்த நாடி கதிப்போடு துடித்து நின்றால்
அறண்டிடும் பைத்திய ந்தான் அடைவொடு வந்து கூடும்”

(அகத்தியர் குணவாகடம்)

“உற்றிடும் பித்த நாடி யொழுங்கொடு எழும்பி நின்றால்
வற்றிடாப் பேசு கின்ற வசனமு மெழும்பி நிற்கும்
மத்திமம் பித்த நாடி மடங்கியே துடித்து நின்றால்
உத்தமப் பேச்சு தானும் ஒடுங்கவாய் குளர்ப் பேசும்”

(அகத்தியர் குணவாகடம்)

“பித்தமாம் நாடிதானேபெலத்தோடு தனித்து நிற்கில்
மத்திய பயித்திய த்தைவளர்த்திடும் வறட்சி சேரும்
உத்தம மூளை தானும்உருகியே குறைந்து நிற்கும்”

(அகத்தியர் குணவாகடம்)

“உற்றிடும் வாதத்தோடு
உறவதால் பித்த மீறில்
நித்தமும் பிதற்றிப் பேசி
நினைவிழந்து இருப்ப ரென்று”

TREATMENT:

“நோய் நாடி நோய்முதநாடிய துதணிக்கும்
வாய்நாடி வாய்ப்பச் செயல்”

-திருவள்ளுவர்.

Thiruvalluvar says in “*Thirukkural*” about physician’s duty to study the disease, Study the cause, seek subsiding ways and do what is proper and effective.

“உற்றவன் தீர்ப்பான் மருந்துழைச் செல்வானென்
றப்பனாற் கூற்றே மருந்து”

-திருவள்ளுவர்.

In Siddha system of medicine, the main aim of the treatment is to cure Udalpini and Manapini. Treatment is not only for perfect healing but also for prevention and rejuvenation. In siddha system of medicine line of treatment are as follows,

- *Neekam* (Treatment)
- *Niraivu* (Rejuvenation)
- *Kappu* (Prevention)

1.Neekam (Treatment):

- விரேசனம்
- உள்மருந்து

- வெளிமருந்து
- பத்தியம்

➤ *Viresanam*:

Siddha system of medicine is based on three humours and hence the treatment is mainly aimed to bring the three humours to equilibrium state and thereby restoring the physiological condition of the seven thatus.

➤ Internal medicine:

The medicines which are taken internally are called as internal medicines. These are classified into 32 types, e.g. surasam, saaru, pittu, vadagam and chooranam, thylam

➤ External medicine:

The medicines which are applied externally are called as external medicines. These also classified into 32 types, e.g. kattu, patru, otradam, vedhu and thokkanam.

➤ *Anubanam*(vehicle):

“அனுபானத்தாலே யவிழ்தம் பலிக்கும்
இனிதான சுக்குஇஞ்சி-பினிமுதுகால்
கோமயம்பால் முலைப்பால் கோ நெய்தேன் வெற்றிலைனீர்
ஆமிதையா ராய்ந்து செய்யலாம்”

-தேரையர் வெண்பா

➤ *Pathiyam* (Dietary Regimen):

In mild conditions of the disease, salt and tamarind can be taken in little quantities. When the condition is severe, tamarind should be avoided and salt must be consumed after frying.

“பத்தியத்தினானே பலனுண்டாகும் மருந்து
பத்தியங்கள் போனால்பலன் போதும் பதியத்தில்
பத்தியமே வெற்றி தரும் பண்டிதர்க்கு ஆதலினால்
பத்தியமே உத்தியென்று பால் “

- தேரையர்,

2.Niraivu (Rejuvenation):

Substances used for neutralising the three humours are:

“ஒன்றிய வாதபித்த கபமிவை யுயராவண்ணம்
நன்றது கறிகளெல்லாம் நாளுமே சமைப்பராய்ந்தோர்
தின்றிடு மிளகு மஞ்சள் சீரகமுயர்ந்த காயம்
வென்றிகொள் சுக்கோடெலம் வெந்தயமுள்ளி சேர்த்தே”

- பதார்த்த குண சிந்தாமணி

The patients are well motivated. The nature and course of the disease is explained to them, Life-style modification advised.

3.Kappu (Prevention):

Ideal measures mentioned in the Siddha classical text Pathartha guna chinthamani for healthy living as below,

“திண்ணமிரண்டுள்ளே சிக்க வடக்காமற்
பெண்ணின்பா லொன்றைப் பெருக்காமல் உண்ணுங்கால்
நீர்சுருக்கி மோர்பெருக்கி நெய்யுருக்கி யுண்பவர்தம்
பேருரைக்கிர போமே பிணி

“ஆறுதிங்கட் கொருதடவை வமனனருந் தயில்வோம்
அடைநான்கு மதிக்கொருகார் பேதியுறை நுகர்வோம்
தேறுமதி யொன்றரைக்கோர் தரநசியம் பெறுவோம்
திங்களரைக் கிரண்டுதரஞ் சவரவிருப் புறுவோம்
வீறுசதுர் நாட்கொருகால் நெய்முக்கைத் தவிரோம்
விழிகளுக்குஞ் சனமூன்று நாட்கொருகா லிடுவோம்
நாறுகந்தம் புட்பமிவை நடுநிசியில் முகரோம்
நமனார்க்கிங் கேதுகவை நாமிருக்கு மிடத்தே

The disease occurs due to activities that increase *azhal* and consuming food that increases *azhal*, so in order to correct the diseases we have to normalize the deranged *azhal* and there by the other factors.

- Ghee based medicine, milk to be administered initially and take purgation and therapeutic vomiting may be advised.
- Medicine which improves the strength of the body.
- *Yogam* is the important *kayakalpam* to treat psychiatric diseases

Yogam is one of the *kayakalpam* methods that preserve physical and mental health by preventing the approach of wrinkling physical and mental health. The practice of yoga integrated the body with the mind and the mind with the soul. Daily practices gradually bring about a change of thoughts, conduct, attitude, behaviour and personality. One feels a unique enthusiasm fearlessness, happiness, dedication, faith, self-confidence, courage, boldness, satisfaction, peace and contentment, culminating into physical fitness and mental stability and emotional quietness and ultimately a fruitful life.

“மனமது செம்மையானால் மந்திரஞ் செபிக்க வேண்டா
மனமது செம்மையானால் வாயுவை உயர்த்த வேண்டா
மனமது செம்மையானால் வாசியை நிறுத்த வேண்டா
மனமது செம்மையானால் மந்திரஞ் செம்மை யாமே”

-அகத்தியர்

Yogam helps to integrate all our five sense organs to react the ecstasy of life following a disciplined manner. There are 8 types,

“இயம நியமமே எண்ணிலா ஆதனம்
நயமுறு பிராணாயாமம் பிரத்தியாகாரஞ்
சயமிகு தாரணை தியானஞ் சமாதி
அயமுறும் அட்டாங்கம் ஆவதும் ஆமே”

-திருமந்திரம்

- *Iyamam*
- *Niyamam*
- *Aadhanam*
- *Pranayamam*
- *Prathiyagaram*
- *Dharanai*
- *Dhiyanam*
- *Samadhi*

These are called “*attanga yogam*” or sub conscious meditation, which is given in *thirumanhthiram*.

IYAMAM:

“கொல்லான் பொய்கூறான் களவு இலான் எண்குணன்
நல்லான் அடக்கம் உடையான் நடுச் செய்ய
வல்லான் பகுத்து உண்பான் மாசு இலான் கள் காமம்
இல்லான்னியமத்துனிடைல் நின்றானே”

-திருமந்திரம்

Iyamam means “learning discipline”, it is an internal practice of cleansing or purifying the mind.

NIYAMAM:

“தூய்மை அருளுண் சுருக்கம் பொறைசெவ்வை
வாய்மை நிலமை வளர்த்தலே மற்றிவை
காமம் களவு கொலையெனக் காண்பவை
நேமியீரைந்துநியமத்தன் ஆமே”

-திருமந்திரம்

The *niyamam* means “purity of action”. The *niyamas* are austerity, contentment, belief in god, charity, worship of god, listening to explain to doctrines, scriptures, modesty, having a discerning mind, repetition of prayers and sacrifice.

AASANAM:

“பங்கயம் ஆதி பரந்த பல் ஆதனம்
இங்குளவாம் இருநாலும் அவற்றினுள்
சொங்கில்லை ஆகச் சுவத்திகம் என மிகத்
தங்க இருப்பத் தலைவனுமாகுமே

-திருமந்திரம்

The *aasanam* means posture or pose, that is, the position of our body with reference to space. All the aasanams prove to be a good training to both body and mind.

PRANAYAMAM:

“பராணன் மனதோடும் பேராது அடங்கிப்
பிராணன் இருக்கின் பிறப்பு இறப்பு இல்லை
பிராணன் மடைமாறிப் பேச்சு அறுவித்து

பிராணன் அடை பெற்றுண்பீர் நீரே”

-திருமந்திரம்

The perfect and scientific art of controlling one's breathing is called *pranayamam*.

PIRATHIYAGARAM:

“மூலத் துவாரத்தை மொக்காரம் இட்டிரு
மேலைத் துவாரத்தின் மேல் மனம் வைத்திரு
வேல் ஒத்த கண்ணை வெளியில் விழித்திரு
காலத்தை வெல்லும் கருத்து இதுதானே”

-திருமந்திரம்

The *prathiyagaram* is the method of withdrawal of sense organs from the external objects.

DHARANAI:

“கோணா மனத்தைக் குறிக்கொண்டு கீழ்க்கட்டி
வீணாத்தண்டு ஊடே வெளியுறந் தான் நோக்கி
காணாக்கண் கேளாச் செவி என்று இருப்பார்க்கு
வாழ்நாள் அடைக்கும் வழி அதுவாமே”

-திருமந்திரம்

Dharanai is fixing the attention on a single object.

DHIYAANAM:

“மனத்து விளக்கினை மாண்பட ஏற்றி
சினத்து விளக்கினைச் செல்ல நெருக்கி
அனைத்து விளக்குந் திரியொக்கத் தூண்ட
மனத்து விளக்கது மாயா விளக்கே”

-திருமந்திரம்

Dhiyaanam is intense contemplation of the nature of the nature of the object of meditation. Meditation on the elements, beginning with the “random” and ending with the “inner consciousness”, enable one to gain mastery over the perception.

SAMAADHI:

“காரியமான உபாதியைத் தாங்கடந்து
ஆரிய காரணம் ஏழும் தன்பாலுற
வாரிய காரண மாய தவத்திடைத்
தாரியல் தற்பரஞ் சேர்தல் சமாதியே”

-திருமந்திரம்

Samaadhi is to merging consciousness with the object of meditation

Aasanam advised for *viyagula unmatham*:

1.Thamarai aasanam(padmasanam):



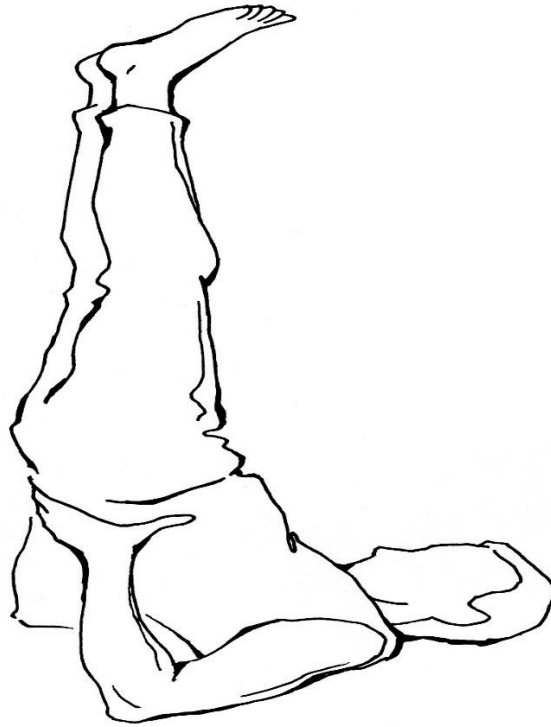
Technique:

- ❖ Put the right leg on the left thigh, keeping the right heel pressing the lower abdomen,
- ❖ Put the left leg on the right thigh keeping the left heel pressing the lower abdomen.

Benefits:

- ❖ Mental concentration is increased.
- ❖ Prevents joint disorders in the old age.
- ❖ Increase the digestive function.
- ❖ Produces clarity of the mind and briskness.

2. *Mutrudal aasanam* (sarvangasanam):



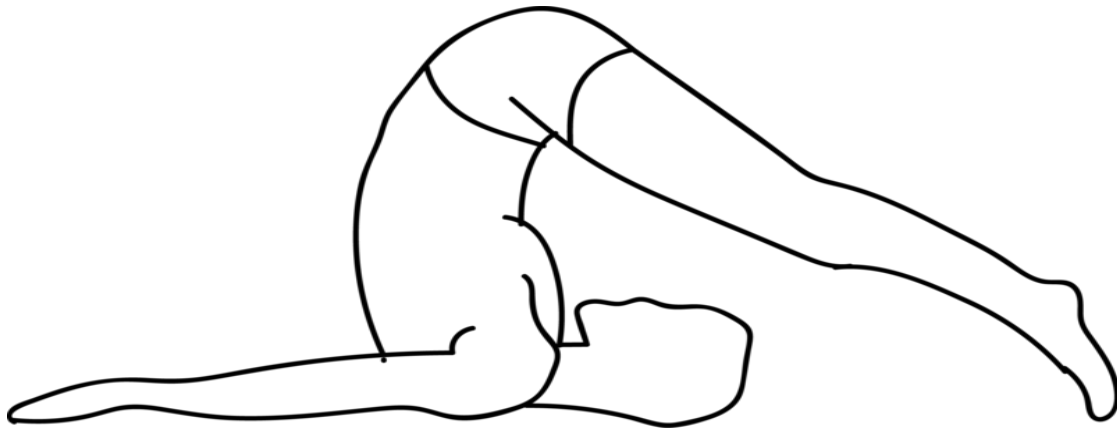
Technique:

- ❖ Lie down on our back with palms facing upwards adjoining the body and legs put together.
- ❖ Raise the legs straight upwards and raise the body supporting the hip with hands till the chin comes into contact with the chest.

Benefits:

- ❖ Increase the memory power.
- ❖ Strengthening the nervous system.
- ❖ Its beneficial to persons suffering from hypothyroidism.

3.Kalappai aasanam(halasanam):



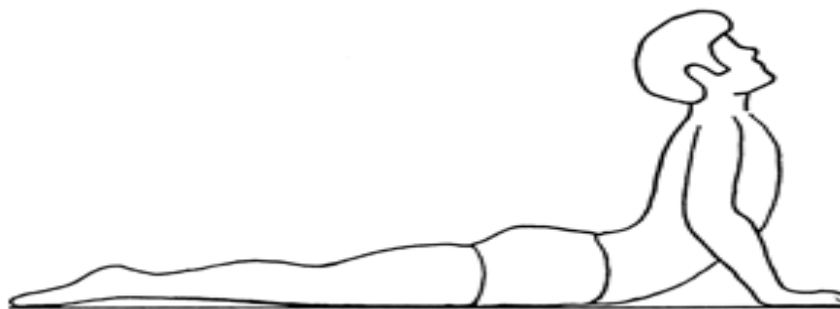
Technique:

- ❖ Lie down and pressing the palms downwards, raise the legs up and flexing the hip and knees.
- ❖ Stretch the legs straight upwardly raise and flex the hip in the direction of the head.

Benefits:

- ❖ It strengthens the brain and spinal cord
- ❖ It stimulates thyroid gland and regulates its function.
- ❖ It strengthens the abdominal organs.
- ❖ The asana increases sexual indulgence.

4.Paambu aasanam(pujangaasanam):



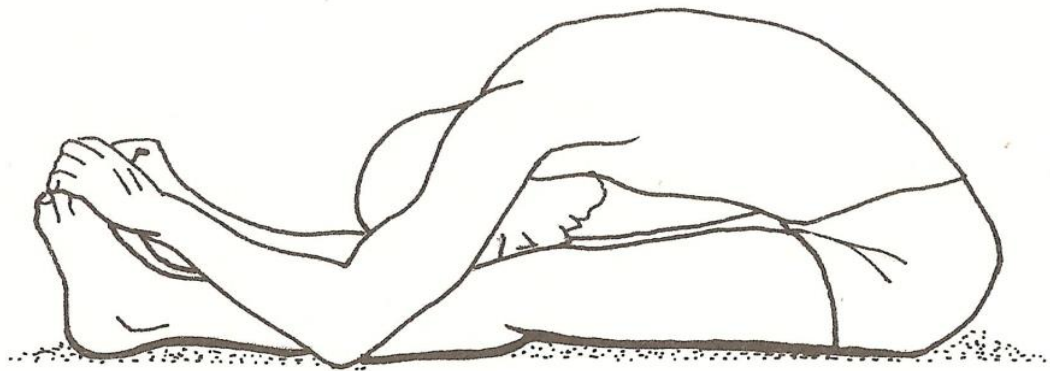
Technique:

- ❖ Lie face downwards with leg stretched and chin rest on the floor.
- ❖ Raise the chest and head slowly and gradually as high as possible above the level of umbilicus

Benefits:

- ❖ Relives loss of sleep.
- ❖ Increases memory power.
- ❖ Relives constipation and increased appetite.
- ❖ Its prevents menstrual disorders and preventing discharge of semen during sleep.

5. *Munvalaivu aasanam*(Patchimottaasanam):



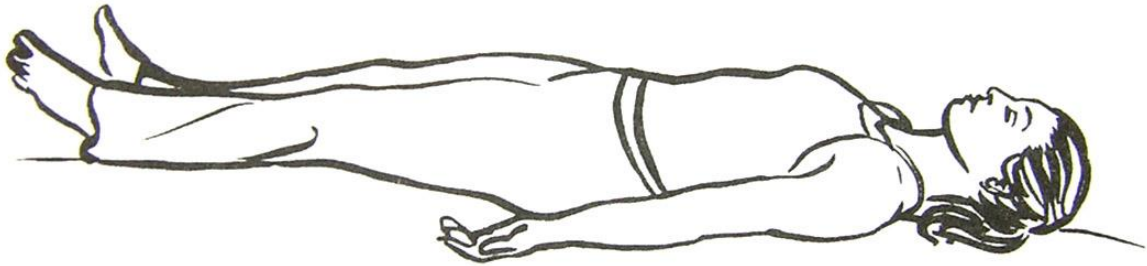
Technique:

- ❖ Sit down with the legs stretched forwards
- ❖ Bend forward to rest the face in between the knees and hold the feet with the hands of the stretched arm.

Benefits:

- ❖ sexual indulgence
- ❖ Increase the appetite
- ❖ Strengthens spinal cord and legs.

6.Savasana (shanthi aasanam):



Technique:

- ❖ Lie down on the floor with an even surface.
- ❖ Palm facing upward and half a foot gap in between the heels, keep the legs in relax manner.

Benefits:

- ❖ Relieves physical and mental tiredness.

INTRODUCTION

Depression is a common mental disorder that presents with depressed mood, loss of interest or pleasure, feelings of guilt or low self-esteem, disturbed sleep or appetite, low energy, and poor concentration. When these problems last for a short period of time, it may be called a passing case of “the blues.” But it’s likely to be a depressive disorder when they last for more than two weeks and interfere with regular daily activities.

Depressive disorders, also known as mood disorders, include three main types: major depression, persistent depressive disorder, and bipolar disorder. Depressive disorders can affect people of any age, including children, teenagers, adults, and older adults.



CAUSES

Depression varies person to person and occurs due to one or more reasons. Depression is most likely due to a combination of genetic, biological, environmental, and psychological factors. Occasionally it may appear for no obvious reason.

Life events

In many cases, the first time someone becomes depressed, it has been triggered by an unwelcome or traumatic event, such as being sacked, divorced, or physically or sexually assaulted.

Loss

Often events or experiences that triggers depression mainly associated with loss of something precious in life. It could be following the actual death of someone close, a major life

change (such as moving house or changing jobs), or simply moving from one phase of life into another, e.g. as you reach retirement, children leave home, or you come to realize that you may never have a family of your own.

It's not just the negative experience that causes the depression, but how we deal with it. If the feelings provoked are not expressed or explored at the time, they fester and contribute towards depression.

Anger

In some cases, some people call depression 'frozen anger'. You may have experienced something which left you feeling angry and helpless, and if you were unable to express your feelings at the time – perhaps because you were a child, or your feelings were unacceptable to others – the anger becomes internalized and is expressed as depression.

Childhood experiences

Traumatic event in childhood, or were abused physically or emotionally, or were not helped to learn good coping skills as you grew up, this can leave you less able to cope with difficulties as an adult.

Women who have been the victim of physical, emotional, or sexual abuse, either as a child or perpetrated by a romantic partner are vulnerable to developing a depressive disorder as well.

Physical conditions

All medical illnesses and their treatment can act as nonspecific stressors, which may lead to mood disorders in predisposed individuals. However, sometimes certain medical conditions are believed to play a more direct role in causing the mood disorder (e.g. *brain disease, certain infections, including HIV, and endocrine disorders*).

The following conditions may cause depression, but are sometimes overlooked because of the focus on their physical symptoms:

- conditions affecting the brain and nervous system
- hormonal problems, especially thyroid and parathyroid problems; symptoms relating to the menstrual cycle or the menopause
- low blood sugar
- sleep problems.

Different neuropsychiatric illnesses seem to be associated with an overabundance or a lack of some of these neurochemicals in certain parts of the brain. For example, a lack of dopamine at the base of the brain causes Parkinson's disease. Alzheimer's dementia seems to be related to lower acetylcholine levels in the brain. The addictive disorders are under the influence of the neurochemical dopamine. That is to say, drugs and alcohol work by releasing dopamine in the brain. The dopamine causes euphoria, which is a pleasant sensation. Individuals with anxiety, attention deficit hyperactivity disorder (ADHD), substance abuse, and developmental disabilities may be more vulnerable to developing depression.

Side effects of medication

Certain medications used for a variety of medical conditions are more likely than others to cause depression as a side effect, for example, many people become depressed after a heart attack, and this may be more likely if they are taking beta blocker medicines as part of their treatment. Specifically, some medications that are used to treat high blood pressure, cancer, seizures, extreme pain, and to achieve contraception can result in depression. Even some psychiatric medications like some sleep aids and medications to treat alcoholism and anxiety can contribute to the development of depression.

Diet

Poor diet and general lack of fitness can both contribute to depression.

In addition, anecdotal evidence suggests that occasionally people become very depressed in response to some specific foods. Such a reaction is very individual, and people are often not aware of the particular food substance or drink that is causing the problem. But if you suddenly feel depressed for no apparent reason, it may be worth considering whether you have eaten or drunk something new, and whether this might have caused your sudden change of mood. If this is the cause, your mood should lift very quickly, so long as you don't consume any more of the particular item.

Street drugs and alcohol

Alcohol is a depressant and will tend to make you feel worse overall. Some street drugs can also depress, especially if used repeatedly. Repeated use of drugs or alcohol, however, desensitizes the dopamine system, which means that the system gets used to the drugs and alcohol. Therefore, a person needs more drugs or alcohol to achieve the same high feeling.

Thus, the addicted person takes more substance but feels less and less high and increasingly depressed.

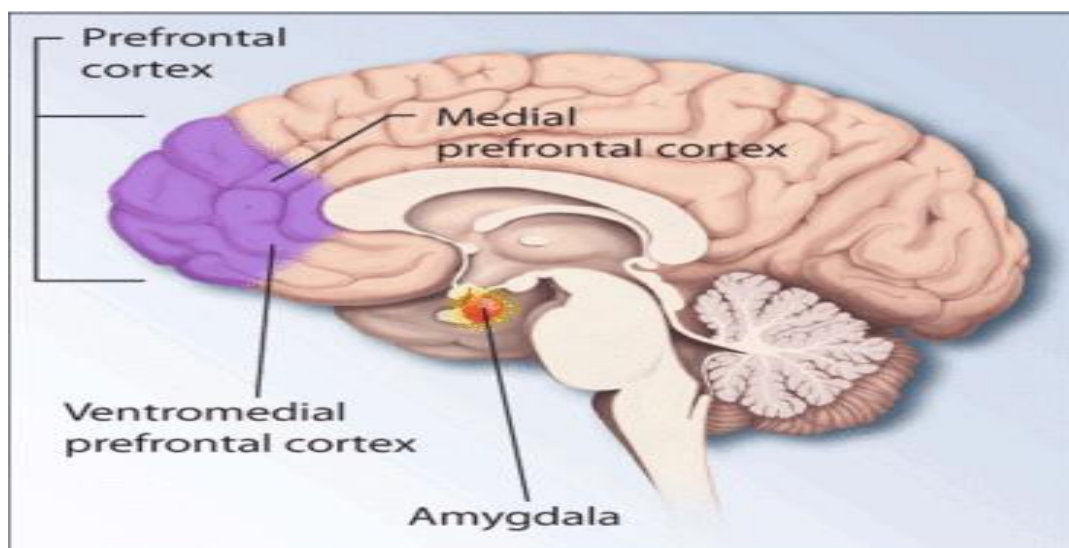
Genetics

Although no specific genes for depression, have been identified, it does seem to run in families to some extent, and some of us are more prone to depression than others. This could also be because we learn behavior and ways of responding from our ancestors, as well as inheriting our genes from them.

The effect of maternal-fetal stress on depression is currently an exciting area of research. It seems that maternal stress during pregnancy can increase the chance that the child will be prone to depression as an adult, particularly if there is a genetic vulnerability. It is thought that the mother's circulating stress hormones can influence the development of the fetus' brain during pregnancy. This altered fetal brain development occurs in ways that predispose the child to the risk of depression as an adult.

Major depression also seems to occur in generation after generation in some families, although not as strongly as in bipolar I or II. Indeed, major depression can also occur in people who have no family history of depression.

Chemical changes in the brain:

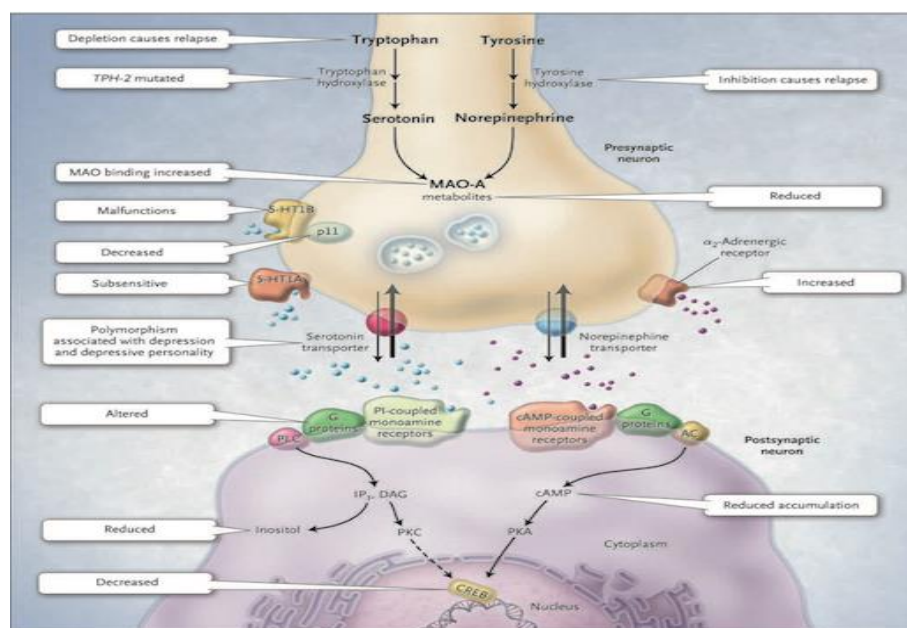


(Medial prefrontal affected in depressive mood, which is to planning cognitive behaviour, personality expression, decision making and moderating social behaviour)

Brain imaging technologies, such as magnetic resonance imaging (MRI), have shown that the parts of the brain involved in mood, thinking, sleep, appetite, and behavior of people who have depression function differently than those of people without it.

Because antidepressants work by changing brain chemistry, many people have assumed that depression must be caused by changes in brain chemistry that are then ‘corrected’ by the drugs. Some psychiatrists may explain you that you have a ‘chemical imbalance’ and need medication to correct it. But the evidence for this, apart from the effects of medication, is very weak, and if changes to brain chemistry occur, we don’t know whether these are the result of the depression or its cause. Although there are physical tests which are occasionally used in research on depression, they are not very accurate or consistent, and there are none that are done routinely to help make a diagnosis.

Monoamine pathways, particularly those involving noradrenaline and 5-hydroxytryptamine (5-HT), innervate cortical and subcortical brain regions thought to be involved in mood regulation. Hypothesis suggests that depressive disorder is due to an abnormality in a monoamine neurotransmitter system at one or more sites in the brain. Three monoamine transmitters have been implicated— serotonin (5-HT), noradrenaline, and dopamine. The latter two neurotransmitters are called *catecholamines*. Biochemical investigations in depressed patients have focused on the *monoamine neurotransmitters* because monoamine pathways appear to play an important role in the actions of effective antidepressant drugs.



Finally, the depressive disorders appear to be associated with altered brain serotonin and norepinephrine systems. Both of these neurochemicals may be lower in depressed people. Please note that depression is "associated with" instead of "caused by" abnormalities of these neurochemicals because we really don't know whether low levels of neurochemicals in the brain cause depression or whether depression causes low levels of neurochemicals in the brain.

DEPRESSION SYMPTOMS:

Depression symptoms include:

- Feelings of sadness or unhappiness
- Irritability or frustration, even over small matters
- Loss of interest or pleasure in normal activities
- Reduced sex drive
- Insomnia or excessive sleeping
- Changes in appetite — depression often causes decreased appetite and weight loss
- In some people it causes increased cravings for food and weight gain
- Agitation or restlessness — for example, pacing, hand-wringing or an inability to sit still
- Irritability or angry outbursts
- Slow thinking, speaking or body movements
- Indecisiveness, distractibility and decreased concentration
- Fatigue, tiredness and loss of energy — even small tasks may seem to require a lot of effort
- Feelings of worthlessness or guilt, fixating on past failures or blaming yourself when things aren't going right
- Trouble thinking, concentrating, making decisions and remembering things
- Frequent thoughts of death, dying or suicide
- Crying spells for no apparent reason
- Unexplained physical problems, such as back pain or headaches

Depression symptoms in children and adolescent:

Common symptoms of depression can be a little different in children and teens than they are in adults.

- In younger children, symptoms of depression may include sadness, irritability, hopelessness and worry.
- Symptoms in adolescents may include anxiety, anger and avoidance of social interaction.
- Changes in thinking and sleep are common signs of depression in adolescents and adults but are not as common in younger children.
- In children and teens, depression often occurs along with behavior problems and other mental health conditions, such as anxiety or attention-deficit/hyperactivity disorder (ADHD).
- Schoolwork may suffer in children who are depressed.

Depression symptoms in older adults:

Depression is not a normal part of growing older, and most seniors feel satisfied with their lives. However, depression can and does occur in older adults. Unfortunately, it often goes undiagnosed and untreated. Many adults with depression feel reluctant to seek help when they're feeling down.

- In older adults, depression may go undiagnosed because symptoms — for example, fatigue, loss of appetite, sleep problems or loss of interest in sex — may seem to be caused by other illnesses.
- Older adults with depression may have less obvious symptoms. They may feel dissatisfied with life in general, bored, helpless or worthless. They may always want to stay at home, rather than going out to socialize or doing new things.
- Suicidal thinking or feelings in older adults is a sign of serious depression that should never be taken lightly, especially in men. Of all people with depression, older adult men are at the highest risk of suicide.

SIGNS AND SYMPTOMS OF DEPRESSIVE DISORDER:



1. A depressive disorder is a syndrome (group of symptoms) that reflects a sad and/or irritable mood exceeding normal sadness or grief. More specifically, the sadness of depression is characterized by a greater intensity and duration and by more severe symptoms and functional disabilities than is normal.

2. Depressive signs and symptoms are characterized not only by negative thoughts, moods, and behaviors but also by specific changes in bodily functions (for example, crying spells, body aches, low energy or libido, as well as problems with eating, weight, or sleeping). The functional changes of clinical depression are often called neurovegetative signs. This means that the nervous system changes in the brain cause many physical symptoms that result in diminished participation and a decreased or increased activity level.

3. Certain people with depressive disorder, especially bipolar depression (manic depression), seem to have an inherited vulnerability to this condition.

4. Depressive disorders are a huge public-health problem, due to its affecting millions of people. About 10% of adults, up to 8% of teens and 2% of preteen children experience some kind of depressive disorder.

The statistics on the costs due to depression in the United States include huge amounts of direct costs, which are for treatment, and indirect costs, such as lost productivity and absenteeism from work or school.

- Adolescents who suffer from depression are at risk for developing and maintaining obesity.

- In a major medical study, depression caused significant problems in the functioning of those affected more often than did arthritis, hypertension, chronic lung disease, and diabetes, and in some ways as often as coronary artery disease.
- Depression can increase the risks for developing coronary artery disease, HIV, asthma, and many other medical illnesses. Other complications of depression include its tendency to increase the morbidity (illness/negative health effects) and mortality (death) from these and many other medical conditions.
- Depression can coexist with virtually every other mental health illness, aggravating the status of those who suffer the combination of both depression and the other mental illness.
- Depression in the elderly tends to be chronic, has a low rate of recovery, and is often undertreated. This is of particular concern given that elderly men, particularly elderly white men have the highest suicide rate.

5. Depression is usually first identified in a primary-care setting, not in a mental-health practitioner's office. Moreover, it often assumes various disguises, which causes depression to be frequently underdiagnosed.

6. In spite of clear research evidence and clinical guidelines regarding therapy, depression is often undertreated. Hopefully, this situation can change for the better.

7. For full recovery from a mood disorder, regardless of whether there is a precipitating factor or it seems to come out of the blue, treatment with medication and/or electroconvulsive therapy (ECT) and psychotherapy are necessary.

TYPES OF DEPRESSION:

Depressive disorders are mood disorders that come in different forms, just as do other illnesses, such as heart disease and diabetes. Three of the most common types of depressive disorders are discussed below. However, remember that within each of these types, there are variations in the number, timing, severity, and persistence of symptoms. There are also differences in how individuals experience depression based on age.

Major depression:

Major depression is characterized by a combination of symptoms that last for at least two weeks in a row, including sad and/or irritable mood (see symptom list), that interfere with the ability to work, sleep, eat, and enjoy once pleasurable activities. Difficulties in sleeping or

eating can take the form of excessive or insufficient of either behavior. Disabling episodes of depression can occur once, twice, or several times in a lifetime.

Dysthymia:

Dysthymia is a less severe but usually more long-lasting type of depression compared to major depression. It involves long-term (chronic) symptoms that do not disable but yet prevent the affected person from functioning at "full steam" or from feeling good. Sometimes, people with dysthymia also experience episodes of major depression. This combination of the two types of depression is referred to as double-depression.

Bipolar disorder (manic depression):

Another type of depression is bipolar disorder, which encompasses a group of mood disorders that were formerly called manic-depressive illness or manic depression. These conditions show a particular pattern of inheritance. Not nearly as common as the other types of depressive disorders, bipolar disorders involve cycles of mood that include at least one episode of mania or hypomania and may include episodes of depression as well. Bipolar disorders are often chronic and recurring. Sometimes, the mood switches are dramatic and rapid, but most often they are gradual. When in the depressed cycle, the person can experience any or all of the symptoms of a depressive disorder. When in the manic cycle, any or all of the symptoms listed later in this article under mania may be experienced. Mania often affects thinking, judgment, and social behavior in ways that cause serious problems and embarrassment. For example, indiscriminate or otherwise unsafe sexual practices or unwise business or financial decisions may be made when an individual is in a manic phase. A significant variant of the bipolar disorders is designated as bipolar II disorder. (The usual form of bipolar disorder is referred to as bipolar I disorder.) Bipolar II disorder is a syndrome in which the affected person has repeated depressive episodes punctuated by what is called hypomania (mini-highs). These euphoric states in bipolar II do not fully meet the criteria for the complete manic episodes that occur in bipolar I.

Postpartum depression:

Postpartum depression (PPD) is a condition that describes a range of physical and emotional changes that many mothers can have after having a baby. PPD can be treated with medication and counseling. Talk with your health-care practitioner right away if you think you have PPD. There are three types of PPD women can have after giving birth

1. The so-called "baby blues" happen in many women in the days right after childbirth. A new mother can have sudden mood swings, such as feeling very happy and then feeling very sad or angry. She may cry for no reason and can feel impatient, irritable, restless, anxious, lonely, and sad. The baby blues may last only a few hours or as long as one to two weeks after delivery. The baby blues do not always require treatment from a health-care provider. Often, joining a support group of new moms or talking with other moms helps.

2. Postpartum depression (PPD) can happen a few days or even months after childbirth. PPD can happen after the birth of any child, not just the first child. A woman can have feelings similar to the baby blues -- sadness, despair, anxiety, irritability -- but she feels them much more strongly than she would with the baby blues. PPD often keeps a woman from doing the things she needs to do every day. When a woman's ability to function is affected, this is a sure sign that she needs to see her healthcare provider right away. If a woman does not get treatment for PPD, symptoms can get worse and last for as long as one year. While PPD is a serious condition, it can be treated with medication and counseling.

3. Postpartum psychosis is a very serious mental illness that can affect new mothers. This illness can happen quickly, often within the first three months after childbirth. Women can experience psychotic depression, in that the depression causes them to lose touch with reality, have auditory hallucinations (hearing things that aren't actually happening, like a person talking), and delusions (seeing things differently from what they are in reality). Visual hallucinations (seeing things that aren't there) are less common. Other symptoms include insomnia (not being able to sleep), feeling agitated (unsettled) and angry, strange feelings and behaviors, as well as having suicidal or homicidal thoughts. Women who have postpartum psychosis need treatment right away and almost always need medication. Sometimes women are put into the hospital because they are at risk for hurting themselves or someone else, including their baby.

DEPRESSION DIAGNOSIS:

People who wonder if they should talk to their health professional about whether or not they have depression may consider taking a depression self-test, which asks questions about depressive symptoms. In thinking about when to seek medical advice about depression, the sufferer can benefit from considering if the sadness lasts more than two weeks or so or if the way they are feeling significantly interferes with their ability to function at home, school, or work and in their relationships with others. The first step to obtaining appropriate treatment is

accurate diagnosis, which requires a complete physical and psychological evaluation to determine whether the person may have a depressive illness, and if so, what type. As previously mentioned, certain medications, as well as some medical conditions, can cause symptoms of depression. Therefore, the examining physician should rule out (exclude) these possibilities through an interview, physical examination, and laboratory tests. Many primary-care doctors use screening tools, symptoms tests, for depression, which are usually questionnaires that help identify people who have symptoms of depression and may need to receive a full mental-health evaluation.

The doctor usually asks about alcohol and drug use and whether the patient has had thoughts about death or suicide. Further, the history often includes questions about whether other family members have had a depressive illness, and if treated, what treatments they received and which were effective.

A diagnostic evaluation also includes a mental status examination to determine if the patient's speech, thought pattern, or memory has been affected, as often happens in the case of a depressive or manic-depressive illness. As of today, there is no laboratory test, blood test, or Xray that can diagnose a mental disorder. Even the powerful CT, MRI, SPECT, and PET scans, which can help diagnose other neurological disorders such as stroke or brain tumors, cannot detect the subtle and complex brain changes in psychiatric illness. However, these techniques are currently useful in research on mental health and perhaps in the future they will be useful for diagnosis as well.

RISK FACTORS

Risk factors of depression	
Lack of social support	Social support serves as a protective factor against depression. People who are isolated and have few friends or family members to turn to in times of stress are more likely to develop depression.
Recent stressful life experience	When people are going through stressful experiences that overwhelm their coping skills, depression often results.

Previous history of Depression	If you've had an episode of major depression before, you are at increased risk of having another episode. The probability of having a recurrence increases with each major depressive episode.
Family history of Depression	If depression runs in your family, your risk for depression is higher. Your risk is particularly high if one of your close relatives, such as parent or sibling, had depression
Lower socioeconomic status	Research has shown that low socioeconomic status is associated with increased rates of depression. People with lower levels of income, education, and occupational status face many obstacles and stressors that likely contribute to this risk.
Underlying emotional or personality disorder	People with pervasive emotional difficulties or personality disorders are vulnerable to depression.
Chronic medical condition	Ongoing medical problems or chronic pain can lead to depression
Female sex	Women are twice as likely to experience depression as men.
Advanced age	People over the age of 65 are more vulnerable to depression.

COMPLICATIONS:

People who are depressed are more likely to use alcohol or illegal substances.

Complications of depression also include:

- Increased risk of physical health problems
- Suicide

Thoughts of Death or Suicide:

People suffering from depression often show distorted thinking. Everything looks bleak to them, and they hold extremely negative views about themselves, their situation, and the future. Trapped in their pessimism, they brood/obsess over their problems and blow them out of proportion. Feeling hopeless and helpless, they may even start to see suicide as their only way out.

Suicidal thoughts are a symptom of severe depression and must always be taken seriously. If someone you know is threatening suicide or talking of wanting to hurt him/herself, seek professional help right away.

PROGNOSTIC FACTORS:

The best predictor of the future course is the history of *previous episodes*. Not surprisingly, the risk of recurrence is much higher in individuals with a history of *several previous episodes*. Other factors that predict a higher risk of future episodes include the following:

- incomplete symptomatic remission
- early age of onset
- poor social support
- poor physical health
- substance abuse
- comorbid personality disorder

The various risk factors, particularly previous pattern of recurrence and the extent of current remission, have important implications for the use of longer- term maintenance treatments. In many patients, depressive disorders are best conceptualized as chronic relapsing conditions that require an integrated longterm treatment approach.

DIFFERENTIAL DIAGNOSIS OF DEPRESSIVE DISORDERS:

Depressive disorders have to be distinguished from the following:

- normal sadness
- adjustment disorder
- anxiety disorders
- schizophrenia
- organic brain syndromes.

PREVENTION:

Do not drink alcohol or use illegal drugs. These substances can make depression worse and might lead to thoughts of suicide.

Take your medication exactly as your doctor instructed. Ask your doctor about the possible side effects and what you should do if you have any. Learn to recognize the early signs that your depression is getting worse. The following tips might help you feel better:

- Do exercise
- Maintain good sleep habits
- Seek out activities that bring you pleasure
- Volunteer or get involved in group activities
- Talk to someone you trust about how you are feeling

INTERNAL DRUG:

THIRUTHARATCHATHA CHOORANAM:

Ingredients:

- *Mundhiri(Anacardium occidentale)*- 1 Palam
- *Pericham(Phonex dactilifera)*- 1 Palam
- *Adhimadhuram(Glycyrrhiza glabra)*- 1 Palam
- *Elam(Selectaria cardamoum)*- 1 Palam
- *Thippili(Piper longum)*- 1 Palam
- *Nerpori(Oryza sativa)*- 1 Palam
- *Krambu(Syzigium aromaticum)*- 1 Palam
- *Ilavanga Pathiri(Cinnamomum tammla)*- 1 Palam
- *Kodiveli(Plumbago indica)*- 1 Palam
- *Koogai Neeru(Maran arundingcea)*- 1 Palam
- *Muthakasu(Cyprus rotundus)*- 1 Palam
- *Mutkai Velai(Gynandropis gynandra)*- 1 Palam
- *Milagu(Piper nigram)*- 1 Palam
- *Kothumalli(Coriandrum sativam)*)- 1 Palam

Method of preparation:

Each drug in these ingredients are dried and made it into fine powder and add equal quantity of sugar.

Internal medicine : *THIRTHARAKCHATHA CHOORANAM*

Dosage : 2 gm, twice a day

Vehicle : Ghee

Duration of treatment: 45 days

EXTERNAL MEDICINE

ARUGANVER THYLAM

Ingredients

- *Aruganver(Cynodan dactylon)*- 8 pangu
- *Karpogarisi(Psoraiea corylifolia)* -1 kalanju

- *Vetti ver*(*Vettiveria zizanioides*)-1 kalanju
- *Kostam*(*Costus speciosus*)-1 kalanju
- *Nalennai*(*Sesamum indicum*)-1 kalanju

Method of preparation

Arugan ver kudineer is prepare into 8:1 ratio. The extract is mix with gingely oil other ingredients are finely powder and added to it. The mixture is boiled and filtered.

PROPERTIES OF TRIAL DRUGS

1.THIRUTHARAKCHATHA CHOORANAM (INTERNAL MEDICINE)

1.Mundhiri

Botanical Name	:	<i>Anacardium occidentale</i>
English Name	:	Cashew nut tree
Family	:	Anacardaceae
Part used	:	Nut

Organoleptic Characters

Taste	:	<i>Inippu</i>
Potency	:	<i>Thadpam</i>
Division	:	<i>Inippu</i>

General Property:

“மெத்தவினிப் பாகுமது மெங்கொடியே தின்றகால்
பித்த வனிலம் பிர்க்குமென்பார்-எத்தலத்தும்
இந்திரியப் புஷ்டி யிளைக்காது மாந்தமுண்டாம்
முந்திரியின் நற்பருப்பை முன்.

- (அகத்தியர்குணவாகடம்)

Chemical Constituents:

- Cardol
- Anacardic acid

Action

- Tonic
- Aphrodisiac
- Diuretic

Medical uses

Latex substance from its bark used to heal the leprosy ulcer, an oil taken from the epidermis of the fruit heals foot fissure.

2.Pericham

Botanical Name : *Phoenix dactilifera*

English Name : Date palm

Family : Arecaceae

Part used : Fruit, Gum

Organoleptic Characters

Taste : *Inippu*

Potency : *Veppam*

Division : *Kaarpu*

General Property

“பேரீந்தெனுங்கனிக்குப் பித்தமத மூர்ச்சைசுரம்
நீரார்ந்த ஐயம் நெடுந்தாகம்-பேரர
இரத்தபித்த நீரிழிவி லைப்பறும் அரோசி
உரத்தமலக் கட்டுமறும் ஓது

-(அகத்தியர்குணவாகடம்)

Chemical Constituents

The predominant mineral was Potassium and rich in sugar. They contained high concentration of aspartic acid, proline, alanine, glycine, valine and leucine. The sugars were glucose and fructose.

Action

- Tonic
- Stomachic
- Refrigerant
- Aphrodisiac

Medicinal uses

Its fruit cures dysentery, leucorrhoea, fever. The Gum when consumed along with water cures urinary tract infection and diarrhoea.

3. *Adhimadhuram*

Botanical Name : *Glycyrrhiza glabra*

English Name : Jequity

Family : Fabaceae

Part Used : Root

Organoleptic Characters

Taste : *Inipu*

Potency : *Seetham*

Division : *Inipu*

General Property:

“தித்திக்கு மதிமதுரக் குணத்தையெடுத்து ரைக்கில்
சிரமயக்கஞ் சுரதாகந் திரிதோடங்க்கள்
பித்தஞ்சத் திக்குமிது குணமா மதுரதீபனமாந்
தாதுவுட்டிணமுந் தவிர்க்கும் விழிக்கிதமாம்
புத்திக்கு வித்தாகுஞ் சந்தாபந் தீர்க்கும்
புகைந்தெடுக்குஞ் சேட்டுமத்தைப் பித்தரோகத்தை
அத்திப்பந் ரீனமேகந் தன்னைவா தத்தினை
யறுத்திடும்வச் சிரமென்பா ரதிமதுரந்தனையே

அதிமதுரம் பேரீந்துக் காணகுணங்க் கேளீர்
கொதிமருவாப் பித்தங்க் குறுகுமே-துதிமருவாய்
நீரதுவு முண்டாம் நிலையாத தாபம்போம்

Chemical Constituents

Triterpenoid saponin-glycyrrhizin (2-20%), a mixture of potassium and calcium salts of glycyrrhizic (glycyrrhetic) acid. Triterpene sterols, triterpenoid saponins, glycyrrhetol, isoglavidin A, B, herniarin.

Action

- Anti ulcer
- Anti hepatotoxic
- Estrogenic
- Anxiolytic
- Cytochrome p^{450A4} inhibitory.

Medicinal uses

It cures cough bronchial asthma, reduces the effects of diseases like jaundice, vitiligo, mental disorder and eye diseases.

4.Elam

Botanical Name : *Elettaria cardamomum*

English Name : cardamom seeds

Family : Zingieraceae

Part used : Seed

Organoleptic Characters

Taste : *Kaarpu*

Potency : *Veppam*

Division : *Kaarpu*

General Property

“தொண்டை வாய்கவுள் தாலுகு தங்களில்
தோன்றும் நோயதி சாரம்பன் மேகத்தால்
உண்டை போலெழுங்க் கட்டி கிரிச்சரம்

உழலை வாந்தி சிலந்தி விஷஞ்சாரம்
பண்டை வெக்கை விதாகநோய் காசமும்
பாழுஞ் சோமப் பிணிவித்து நட்டமும்
அண்டை யீளைவன் பித்தம் இவைக்கெல்லாம்
ஆல மாங்க்கமழ் ஏல மருந்தே...

- (அகத்தியர்குணவாகடம்)

Chemical Constituents

It consists some terpenes like Cineol and Limonene

Action:

- Stimulant
- Carminative
- Stomachic

Medicinal uses:

It is used to treat wide range of Gastrointestinal disorders such as gastritis, peptic ulcers etc.

5.Thippili

Botanical Name : *Piper longum*

English Name : Long piper

Family : Piperaceae

Organoleptic Characters

Taste : *Inippu*

Potency : *Thatpam*

Division : *Inipu*

General Property

“கட்டி யெதிர்நின்று கடுநோயெல் லாம்பணியும்
திட்டி வினையகலும் தேகமெத்த-புட்டியாம்
மாமனுக்கு மாமனென மற்றவனாங்
காமமனுந் திப்பிலிக்கும் கை

(தே.வெண்பா)

Chemical Constituent

Piperine (4-5%) and volatile oil (1%) and piperlonguminine, pipartine, piperundecalidine, sesamin, resin, dihydrostigmastrol.

Action:

- Hepato protective
- Sedative
- Analgesic
- Cholagogue

Medicinal uses

It roots cures cough, bronchial asthma, peptic ulcer. The extract of Thippili with milk administer for *mupini*. It is also used as an Antidote.

6.Nerpori

Botanical Name : *Oryza sativa*

English Name : paddy

Family : Poaceae

Organoleptic Characters

Taste : *Inipu*

Potency : *Thatpam*

Division : *Inipu*

General Property

“நெற்பொரியைத் தின்றால் நெடுந்தாகம் வாந்திமந்தம்
மற்பித்த வாதமத மூர்ச்சை-பற்பலவாம்
பேதி யருசியிவை பேருலகை விட்டொழியுஞ்
சாதி மடமயிலே யறிவாய்

- (அகத்தியர்குணவாகடம்)

Chemical Constituents

Whole grain rice contains significant amounts of vitamin B1, B2, B6, E and Niacin.

Action

- Nutrient
- Demulcent
- Refrigerant

Medicinal uses

It has anti-inflammatory action when applied externally. Rice powder with turmeric powder reduces swelling in condition of muscle sprain or any injury.

7.Kirambu

Botanical Name : *Syzigium aromaticum*

English Name : Cloves

Family : Myrtaceae

Part used : Dried flower bud

Organoleptic characters

Taste : *Karam*

Potency : *Veppam*

Division : *Kaarpu*

General Property

“பித்த மயக்கம் பேதியொடு வாந்தியும்போம்
சுத்தவிரத் தக்கடுப்புந் தொன்றுமோ-மெத்த
எலவங்கங் கொண்டவருக்கேற் சுகமாகும்
மலமங்கே கட்டுமென வாழ்த்து.
சுக்கிலநட் டங்கர்ண சூர்வியங்க லாஞ்சனந்தாட்
சிக்கல்விடா சர்வா சியப்பிணியு-மக்கிக்குட்
டங்கப் பூவோடு தரிபடருந் தோன்றிலில்
வங்கப்பூ வோடுரைத்து வா

- (அகத்தியர் குணவாகடம்)

Chemical Constituents

Volatile oil (15-20%) containing chiefly a phenol eugenol (55-85%) and beta caryophyllene (-10-20%) and eugenol acetate and derivatives of B-caryophyllene, acetophenone, benzyl salicylate, propylbenzoate.

Action

- Antispasmodic
- Carminative
- Stomachic
- Antioxidative
- Anti-thrombotic

Medicinal uses:

Its oil cures Gingivitis, sensitive tooth and tooth carries and was applied by dipped cotton. Its powder with water when applied on fore head and nasal ridge reduces sinus head ache.

8. *Ilavanga Pathiri*

Botanical Name : *Cinnamomum tammla*

English Name : cloves

Family : Lauraceae

Organoleptic Characters

Taste : *Kaarpu, viruviruppu*

Potency : *Veppam*

Division : *Kaarpu*

General Property

“மேகசுரம் சீதசுரம் வெட்டைசுவா சங்காசம்
தாகபித்தம் வாந்திசர் வாசியநோய்-மேகத்தின்
கட்டியொடு தாதுநட்டங் கைப்பருசி போக்கிவிடும்
இட்ட இலவங்கத் திலை

-(அகத்தியர் குணவாகடம்)

Action

- Antispasmodic
- Carminative
- Stomachic

Medicinal uses

Its leaf cures asthma, cough, excessive thirst, vomiting and fever.

9.Kodiveli

Botanical Name : *Plumbago indica*

English Name : Ceylon lead-wort

Family : Plumbaginaceae

Part Used : Root

Organoleptic Characters

Taste : *Kaarpu*

Potency : *Veppam*

Division : *Kaarpu*

General Property

“சூலையும் வாய்வுஞ் சுகசன்னி மாந்தசுரஞ்
சீலசிர நோய்வாதந் தீருங்காண்-கோலமயிந்
பேடனைய மாதே! பிறங்கு சித்ரம்மூலம்
சேடுசெம்பைத் துய்யப்பற்பஞ் செய்

-(அகத்தியர் குணவாகடம்)

Chemical Constituents

Plumbagin, Tannin, Steroids, glucoside, triterpenes

Action

- Stimulant
- Rubefacient

Medicinal uses

Roots are used in the treatment of paralytic affections, ulcers, leprosy, enlarged spleen, piles, skin diseases and influenza. The plumbagin shows antimicrobial activity. Plumbagin is an important naphthoquinone which has anticancer activity, antibacterial, antifungal, antimutagenic, anti-inflammatory and insecticidal activities.

10.Koogai Neeru

Botanical Name : *Maran arundinacea*

English Name : East Indian arrow root

Organoleptic Characters

Taste : *Inippu*

Potency : *Thatpam*

Division : *Inippu*

General Property

“மேனியிடும் வாய்க்கு மிருதுவாம் ஆக்கியுண்ணத்
தானிருமல் வெப்பதிக தாகமிவை-ஏனிருக்கும்
அம்பே றிளங்கிழங்கி தியாவர்க்கு மாமணம்பூங்
கொம்பே!கூகைக் கிழங்கைக் கூறு

- (அகத்தியர் குணவாகடம்)

Action

- Refrigerant
- Demulcent
- Nutrient

Medicinal uses

Powdered root reduces stomach pain and diarrhoea in people with Irritable Bowel Syndrome.

11.Muthakasu

Botanical Name : *Cyprus rotundus*

English Name : nut grass

Family : Cyperaceae

Organoleptic Characters

Taste : *Inipu*

Potency : *Thatpam*

Division : *Inipu*

General Property

“சீத சுரந்தீர்க்குஞ் செம்புனல்பித் தம்போகும்
வாத சுரந்தணிக்கும் வையகத்தில் -வேதைசெய்ய
வந்த பிணியையெல்லாம் வாட்டுமுத் தக்காசு
கொந்துலவும் வார்குழலே! கூறு

“அதிசாரம் பித்தம் அனற்றாகம் ஐயங்
குதிவாதஞ் சோபங்கொடிய-முதிர்வாந்தி
யாரைத் தொடர்ந்தாலும் அவ்வவர்க்கே லாங்குளத்துக்
கோரைக் கிழங்கைக் கொடு.

- (அகத்தியர் குணவாகடம்)

Chemical Constituents

Pinene, Cineole, Sesquiterpenes, Glycerol, Linolenic acid, Linoleic acid, Oleic acid.

Action

- Astringent
- Tonic
- Stimulant
- Demulcent
- Tonic

Medicinal uses

Its root used to cure Hypertension, Tuberculosis. Its root extract added in Nalangumavu preparation.

12.Nal Velai

Botanical Name	:	<i>Gynandropis gynandra</i>
English Name	:	dog mustard
Family	:	Caparaceae
Part Used	:	Leaf, Flower, Seed, Root

Organoleptic Characters

Taste	:	<i>Kaarpu</i>
Potency	:	<i>Veppam</i>
Division	:	<i>Kaarppu</i>

General Property

“சரநோய் வலிகுடைச்சல் தீராஸ் சயித்தியம்
உரநோ யிவைக ளொழியும்-உரமேவும்
வில்வேளைக் காயும் விழியாய் பசிகொடுக்கும்
நல்வேளை தன்னை நவில்

நல்லவே ளைப்பூண்டை நாடுங்கால் வாதமும்போம்
சொல்லுமை யத்துடனே சோபையறும்-மெல்லமெல்ல
தக்க வனலும்பித்துந் தானெழுபஞ்சாந்தமின்றி
அக்கரம்நோய் மிஞ்சு மறி

-(அகத்தியர்குணவாகடம்)

Chemical Constituents

Beta carotene, Folic acid, ascorbic acid, calcium, Vit E and Iron.

Action:

- Antispasmodic
- Carminative

Medicinal uses

The leaves have anti oxidative properties and used in inflammatory diseases. Juice of the root is used to relieve scorpion stings.

13.Milagu

Botanical Name : *Piper nigrum*

English Name : black pepper

Family : Piperaceae

Parts Used : Seed

Organoleptic Characters

Taste : *kaippu,kaarppu*

Potency : *veppam*

Division : *kaarppu*

General Property

“தீயாகி யெங்கும் திரியுமதை யாவத்து
மோயாம லெப்படியு முண்டாக்காற்-பாயாது
போந்திமிர்வா தங்கிரந்தி புண்ணீரும் மண்ணவர்க்கும்
காந்திமெய்வா தச்சலுப்பைக் காய்

-(அகத்தியர்குணவாகடம்)

Chemical Constituent

The drug contains volatile oil (1-2.5%). Alkaloids/amides (5-9%), and a resin.

- **Major:** A pungent alkaloid, piperine (2-5%).
- **Minor:** a number of alkaloids/amides ex: piperine, piperettine, piperanine, piperamides, pipericide, gunineensine, saramenttine, Propenylphenols viz., eugenol, myristicine, safrol e; mono and sequiterpenes.

Action

- Anti-convulsant properties
- CNS depressant

- Analgesic
- Anti-oxidant
- Hepatoprotective

Medicinal uses

Fruits used in indigestion, asthma, fever, cough, arthritis and haemorrhoids.

14.Kothumalli

Botanical Name : *Coriandrum sativam*

English Name : coriander seeds

Family : Apiaceae

Parts Used : Leaf , Seed

Organoleptic Characters

Taste : *kaarpu*

Potency : *setha veppam*

Division : *kaarpu*

General Property

“கொத்துமல்லி வெப்பம் குளிர்காய்ச்சல் பித்தமந்தஞ்
சர்த்திவிக்கல் தாகமொடு தாதுநட்டம்-கத்தியெழும்
வாத விகார்ட்டர் வங்கர்த்த பிவிரணம்
பூதலத்தில் லாதகற்றும் போற்று

- (அகத்தியர்குணவாகடம்)

Chemical Constituents

Essential oil (-1%), the major component of which is S-(+)-linalool (60-70%), monoterpene hydrocarbons, thiazole, coriandrones A-E, flavonoids, phthalides, phenolic acids and sterols.

Action

- Hypolipidemic
- Preventive effect on lead deposition
- Insulin releasing

- Spasmolytic
- Stomatic
- Carminative

Medicinal uses

Its dried seed extract strengthens the heart, chewing its plain fruit reduces bad odour from mouth. It also used for indigestion, dehydration, vomiting.

EXTERNAL MEDICINE

ARUGANVER THYLM

1.Aruganver

Botanical Name : *Cynodan dactylon*

English Name : Barmuda Grass

Family : Poaceae

Parts Used : Grass , Root

Organoleptic Characters

Taste : *Inippu*

Potency : *Thatpam*

Division : *Inippu*

General Property

“ஆறா அழலெல்லா மாறுமுத் தோடமது
வீறா திருக்குநல்ல மேனிதரும்-மாறாக்
கடியமர லங்க்லணி காரளக மின்னே
கொடியறுகம் புற்கிழங்கைக் கூறு

- (அகத்தியர்குணவாகடம்)

Chemical constituent

Palmitic acid, arundoin, beta carotene, ergonovine

Action

- Emolient

- Astringent
- Duretic
- Styptic

Medicinal uses

Extract cures all bleeding disorders, scabies and tinea. It acts as an antidote for rat bite.

2.Karpogarisi

Botanical Name : *Psoraiea corylifolia*

English Name : Babchi Seeds

Family : Faaceae

Parts Used : Seed

Organoleptic Characters

Taste : *Kaippu*

Potency : *Veppam*

Division : *Kaarpu*

General Property

“கார்போக மாமரிசி கண்டாற் கரப்பான்புண்
பீர்சுருவ நஞ்சிவைபோம் பித்தமுண்டாம்-பார்மீதில்
வாத கபநமைச்சல் வன்சொறிசி ரங்குமறுஞ்
சீத மலர்க்குழலாய் செப்பு. - (அகத்தியர்குணவாகடம்)

Chemical constituent

Psoralen, flavanoid, coumarin, meroterpenes.

Action

- Laxative
- Stimulant

Medicinal uses

Acts as an antidote for snake bite, it cures ulcers, tinea and other skin disorders.

3. *Vetti ver*

Botanical Name : *Vettiveria zizanioides*

English Name : Cuscus root

Family : Poaceae

Parts used : Root

Organoleptic Characters

Taste : *Inippu*

Potency : *Thatpam*

Division : *Inippu*

General Property

“பித்தவி தாகம் சகிகா மிலங்க்கறைப் பித்தமனற்
றத்திடு குட்டஞ் சிரநோய் களமடி தாதுநட்ட
மத்தம் நற்புண் டனப்புண்வன் மூர்ச்சை வரிவிழிநோய்
வித்திர மேகத்தின் கட்டியும் போம் வெட்டி வேரினுக்கே

- (அகத்தியர்குணவாகடம்)

Chemical constituent

Vetivene, khusimene, khusimone, furfura, benzoic acid

Action

- Tonic
- Stimulant
- Anti-spasmodic
- Emmenagogue

Medicinal uses

It cures hypertension, excessive thirst, fever and jaundice.

4. *Kostam*

Botanical Name : *Costus speciosus*

English Name : Costus Root

Family : Zingiberaceae

Organoleptic Characters

Taste : *Kaippu , viruviruppu*

Potency : *Veppam*

Division : *Kaarpu*

General Property

“நாட்டிலுறு வெட்டை நடுக்கம் எனுநோய்கள்
கோட்டமெனுஸ் சொன்னல் சூலையுங்காண்-கூட்டிற்
சுரதொடந் தொண்டைநோய் தோலாத பித்தம்
பரதேசம் போமே பறந்து.
திட்டிகவுள் அகடுகளஞ் சென்னி நாவாய்
செறிபிணிவெப் பதைப்புதா வர்த்தம் ஊதை
முட்டியெழு முளைவிரணம் சுவாச காசம்
மூடிகத்தோட ரவுமர விடங்கள் மேகக்
கட்டி அஜ் கல்லிட பாகம் பூத
கணம்போல கிரகமொடு தாது நட்டஞ்
சொட்டிவரு பிரமிபித்தம் இவையோ ருங்கே
தொலையும்விர ணாரிக்குஸ் சுசப்போறாமே

-(அகத்தியர்குணவாகடம்)

Chemical constituent

Succinic acid, beta sitosterol, tetra cosanoic acid, daucosterin.

Action

- Stomachic
- Expectorant
- Tonic
- Stimulant

Medicinal uses:

It is used in case of fever and haemorrhoids. It also acts as an antidote for snake and rat bite.

5.Nalennai

Botanical Name : *Sesamum indicum*

English Name : Gingelly oil plant

Parts Used : Leaf , Flower , Raw Seed

Family : Pedaliaceae

Organoleptic Characters

Taste : *Inippu*

Potency : *Veppam*

Division : *Inippu*

General Property

புத்திநயனக்குளிர்ச்சி பூரிப்பு மெய்ப்புளகஞ்
சத்துவங்க் கந்தி தனியிளமை-மெத்தவுண்டாங்க்
கண்ணோய்ன் செவிநோய் கபாலவழல் காசநோய்
புண்ணோய்போ மெண்ணாய்யாற் போற்று

- (அகத்தியர்குணவாகடம்)

Chemical constituent

Vitamin E, Sesamin, Sesamolin, Phytosterol.

Action

- Laxative
- Nutrient
- Emolient

Medicinal uses:

It cures ulcers and other skin disorder, eye and ear disorder.

STANDARD OPERATING PROCEDURE

Source of raw drugs

The required raw drugs for the trial medicine will be purchased from a well reputed country raw drug shop and drugs were authenticated by the competent authority Medicinal Botany and Gunapadam dept. After that the raw drugs will be purified as per siddha literatures then the trial drugs prepared in Gunapadam laboratory of National Institute of Siddha.

BOTANICAL AUTHENTICATION CERTIFICATE NO: NISMB3382018.

INTERNAL DRUG: *THIRUTHARATCHATHA CHOORANAM*

Ingredients

- *Mundhiri(Anacardium occidentale)*- 1 Palam
- *Pericham(Phonex dactilifera)* - 1 Palam
- *Adhimadhuram(Glycyrrhiza glabra)* - 1 Palam
- *Elam(Electaria cardamoum)* - 1 Palam
- *Thippili(Piper longum)* - 1 Palam
- *Nerpori(Oryza sativa)*)- 1 Palam
- *Krambu(Syzigium aromaticum)* - 1 Palam
- *Ilavanga Pathiri(Cinnamomum tammla)* - 1 Palam
- *Kodiveli(Plumbago indica)*)- 1 Palam
- *Koogai Neeru(Maran arundingcea)* - 1 Palam
- *Muthakasu(Cyprus rotundus)* - 1 Palam
- *Mutkai Velai(Gynandropis gynandra)*)- 1 Palam
- *Milagu(Piper nigram)* - 1 Palam
- *Kothumalli(Coriandrum sativam)* - 1 Palam

METHOD OF PURIFICATION OF RAW DRUGS:

Purification of *Munthiri*

Dust particles are removed and the cashews are roasted.

[*Marunthu Sei iyalum kalayum: 286*]

Purification of *Ellam*

Dust particles are removed and It is roasted.

[*Ref: Sikicha Rathina Deepam Ennum Vaithiya Nool: 28*]

Purification of *Muthakaasu*

Dust particles are removed and It is roasted

[Ref: *Marunthu Sei iyalum kalayum*]

Purification of *Milagu*

Soak in the buttermilk for three hours then dried and powdered.

[Ref: *Sikicha Rathina Deepam Ennum Vaithiya Nool* page 28]

Purification of *Thippili*

Soak in juice of Lime for a period of time then allowed it to dry.

[Ref: *Sarakugalin sutheemuraigal* page 7]

Purification of *Athimathuram*

Removed the outer cover, cut into small pieces and dried it in shadow.

[Ref: *Sighitcha Rathan Deepam Ennum Vaithiya Nool*, Page: 29]

Purification of *Lavangapathiri*

Removed the flowerlets and dried in the shadow.

[Ref: *Sighitcha Rathan Deepam Ennum Vaithiya Nool*, Page: 29]

Purification of *Kothamalli*

Removed the dust particles and dried it in shadow.

[Ref: *Sarakugalin suthee muraigal* page 7]

Purification of *Koogaineer*

Dissolved and wash it in water for 7 times and dried it in shadow.

[Ref: *Sikicha Rathina Deepam Ennum Vaithiya Nool*, page 35]

Purification of *Kirambu*

Dust particles removed and its dried it in shadow.

[Ref: *Sarakugalin suthee muraigal* page : 6]

Purification of *Kodivelli*

Kodiveli ver (root of Plumbago indigo) Removed the inner nerve of the root and powder the outer part of root. Took a pot with milk and its mouth was covered with white

cloth then the powder over it and closed it with another vessel. It was heated for 3 hours then dried and grinded.

[Ref: *Sigicharathinatheepam* :29]

METHOD OF PREPARATION

All the above-mentioned ingredients are taken in equal amount and dried, then made into fine powder and add equal quantity of sugar. The powder is purified. Then the medicine stored in an air tight container.

Dosage : 2 gram twice a day with ghee

Duration : 48 days

EXTERNAL MEDICINE: *ARUGANVER THYLAM*

Ingredients

- *Aruganver (Cynodon dactylon)*- 8 pangu
- *Karpogarisi (Psorlea corylifolia)* -1 kalanju
- *Vetti ver (Vettiveria zizanioides)* -1 kalanju
- *Kostam (Costus speciosus)* -1 kalanju
- *Nalennai (Sesamum indicum)* -1 kalanju

METHOD OF PREPARATION

The purified *Arugan ver* (350 gms) mixed with 10.7 litre of water and heated upto 1/8th ratio of water and take it as decoction. The extract is mixed with gingely oil and are finely powdered and added to it. The mixture is boiled till it attained the suitable consistency and filtered it.

Dosage: QS

Drug storage:

The trial drug *Thirutharatchatha chooranam* is stored in clean and dry container and *Aruganver Thylam* is stored in clean and dry narrow mouthed bottles.

DISPENSING:

- The Powder is given in packet (28 gram for one week)
- Oil is given in pet bottles (Q.S for oil bath).



MUNDHIRI



PEERECHU



ELAM



KIRAMBU



THIPPILI



KORAIKIZHANGU



KOTHAMALLI



KODIVELI



ATHIMATHURAM



KIRAMBU



NERPORI



ILAVANGAPATHIRI



KOOGAI NEER



SARKARAI



KOSTAM



KARPOGARISI



VETTI VER



ARUGAN VER



NALLENNAI



THIRUTHARAKCHATHA
CHLOORANAM



ARUGANVER THYLAM

Experimental procedure

5 g of *THIRUTHARAKCHATHA CHOORANAM* was taken in a 250 ml of clean beaker and 50ml of distilled water was added to it. Then it was boiled well for about 10 min. Then it is allowed to cool and filtered in a 100 ml volumetric flask and made up to 100 ml with distilled water. This preparation is used for the qualitative analysis of acidic/ basic radicals and biochemical constituents in it.

Preparation of extract

5gm of *THIRUTHARAKCHATHA CHOORANAM* was weighed accurately and placed in a 250ml clean beaker and 50ml of distilled water was added with it. Then it was boiled well for about 10 minutes. Then it was allowed to cool and filtered in a 100ml volumetric flask and made up to 100ml with distilled water. The bio-chemical analysis of *THIRUTHARAKCHATHA CHOORANAM* was done at Biochemistry lab, National Institute of siddha, Chennai-47.

Preliminary test for Copper, Sodium, Silicate and Carbonate

- **Test for Silicate:** a. A little (500mg) of the sample is shaken well with distilled water.
b. A little (500mg) of the sample is shaken well with con. HCl/Con. H₂SO₄.
- **Action of Heat:** A small amount (500mg) of the sample is taken in a dry test tube and heated gently at first and then strong.
- **Action of Heat:** A small amount (500mg) of the sample is taken in a dry test tube and heated gently at first and then strong.
- **Flame Test:** A small amount (500mg) of the sample is made into a paste with con. HCl in a watch glass and introduced into non-luminous part of the Bunsen flame.
- **Ash Test:** A filter paper is soaked into a mixture of sample and dil. cobalt nitrate solution and introduced into the Bunsen flame and ignited.

Test for Acid Radicals

- **Test for Sulphate:** 2ml of the above prepared extract was taken in a test tube and 2ml of 4% dil. ammonium oxalate solution was added.
- **Test for Chloride:** 2ml of the above prepared extracts was added with 2ml of dil-HNO₃ until the effervescence ceases off. Then 2 ml of silver nitrate solution was added.

- **Test for Phosphate:** 2ml of the extract was treated with 2ml of con. HNO₃ and 2ml of dil. ammonium molybdate solution.
- **Test for Carbonate:** 2ml of the extract was treated with 2ml dil. magnesium sulphate solution
- **Test for Nitrate:** 1gm of the substance was heated with copper turning and concentrated H₂SO₄ and viewed the test tube vertically down.
- **Test for Sulphide:** 1gm of the substance was treated with 2ml of con. HCL
- **Test for Fluoride & Oxalate:** 2ml of extract was added with 2ml of dil. Acetic acid and 2ml dil. calcium chloride solution and heated.
- **Test for Nitrite:** 3drops of the extract was placed on a filter paper, on that-2 drops of dil. acetic acid and 2 drops of dil. Benzidine solution were placed.

Test for Basic Radicals

- **Test for Lead:** 2ml of the extract was added with 2ml of dil. potassium iodine solution.
- **Test for Copper:** One pinch (50mg) of substance was made into paste with con. HCl in a watch glass and introduced into the non-luminous part of the flame.
- **Test for Aluminium:** In the 2ml of extract dil. sodium hydroxide was added in 5 drops to excess.
- **Test for Iron:** a. To the 2ml of extract add 2ml of dil. ammonium solution
- b. To the 2ml of extract 2ml thiocyanate solution and 2ml of con HNO₃ is added
- **Test for Zinc:** In 2ml of the extract dil. sodium hydroxide solution was added in 5 drops to excess and dil. ammonium chloride was added.
- **Test for Calcium:** 2ml of the extract was added with 2ml of 4% dil. ammonium oxalate solution
- **Test for Magnesium:** In 2ml of extract dil. sodium hydroxide solution was added in drops to excess.
- **Test for Ammonium:** In 2ml of extract 1 ml of Nessler's reagent and excess of dil. sodium hydroxide solution were added.
- **Test for Potassium:** A pinch (25mg) of substance was treated with 2ml of dil. sodium nitrite solution and then treated with 2ml of dil. cobalt nitrate in 30% dil. glacial acetic acid.
- **Test for Sodium:** 2 pinches (50mg) of the substance was made into paste by using HCl and introduced into the blue flame of Bunsen burner.

- **Test for Mercury:** 2ml of the extract was treated with 2ml of dil. sodium hydroxide solution.
- **Test for Arsenic:** 2ml of the extract was treated with 2ml of dil. sodium hydroxide solution.

Other constituents:

- **Test for Starch:** 2ml of extract was treated with weak dil. iodine solution
- **Test for Reducing Sugar:** 5ml of Benedict's qualitative solution was taken in a test tube and allowed to boil for 2 minutes and added 8 to 10 drops of the extract and again boil it for 2 minutes.
- **Test for The Alkaloids:** a) 2ml of the extract is treated with 2ml of dil. potassium iodide solution. b) 2ml of the extract is treated with 2ml of dil. picric acid.
- **Test for Tannic Acid:** 2ml of extract was treated with 2ml of dil. ferric chloride solution
- **Test for Unsaturated Compound:** In the 2ml of extract 2ml of dil. Potassium permanganate solution was added.
- **Test for Amino Acid:** 2 drops of the extract were placed on a filter paper and dried well, and then 20ml of Burette reagent was added in it.

CLINICAL STUDY

Clinical trail Approval Registration

The clinical trail was approved by the Institutional Ethical Committee (IEC) of National Institute of Siddha, Chennai 47, [NIS/IEC/2016/11-12/14.10.2016] and further registered Clinical Trail Registry of India [REG. NO. CTRI/2018/04/013421].

Study type : An open clinical trial

Study place : OPD of Ayothidoss Pandithar Hospital,
National Institute of Siddha
Tambaram sanatorium, Chennai-47

Study period : 2015-2018

Sample size : 30 Patients

SUBJECT SELECTION:

Patients reporting with symptoms of inclusion criteria will be subjected to screening test and documentation.

INCLUSION CRITERIA

- Age: between 20 years and 55 years
 - Sex: Male and female
 - Depressed mood
 - Reduced level of interest
 - Considerable loss or gain of weight
 - Insomnia or hypersomnia
 - Psychomotor agitation or retardation
 - Fatigue
 - Thoughts of extreme guilt
 - Diminished ability to think or concentrate
 - Suicidal thoughts
 - Willing to participate in trial and signing consent by fulfilling the conditions of proforma
 - Willing to give blood sample for analysis for laboratory investigations
- (If 8 – 10 criteria are positive, the patients will be included for the study)

EXCLUSION CRITERIA

- Pregnancy and lactation
- Diabetes mellitus
- Psychosomatic disorders
- Cardiac disease
- Any other serious systemic illness

WITHDRAWAL CRITERIA

- Intolerance to the drug and development of adverse reactions during drug trial.
- Poor patient compliance and defaulters.
- Patient turning unwilling to continue in the course of clinical trial.
- Occurrence of any serious illness
- Increase in the severity of the symptoms.

TESTS AND ASSESSMENTS

1. Clinical assessment
2. Siddha system assessment
3. Routine investigations

1. CLINICAL ASSESSMENT

- Depressed mood
- Reduced level of interest
- Considerable loss or gain of weight
- Insomnia or hypersomnia
- Anhedonia
- Fatigue
- Thoughts of extreme guilt
- Suicidal thoughts

GRADATION

HAMILTON DEPRESSION RATING SCALE (HAM-D)

The Hamilton Depression Rating Scale (HAM-D) has proven useful for many years as a way of determining a patient's level of depression before, during, and after treatment. It should be administered by a clinician experienced in working with psychiatric patients.

Although the HAM-D form lists 21 items, the scoring is based on the first 17. It generally, takes 15-20 minutes to complete the interview and score the results. Eight items are scored on a 5-point scale, ranging from 0 = not present to 4 = severe. Nine are scored from 0-2.

Since its development in 1960 by Dr. Max.Hamilton of the University of Leeds, England, the scale has been widely used in clinical practice and become a standard in pharmaceutical trials.

HAMILTON DEPRESSION RATING SCALE (HAM-D)”

Patient's Name

Date of Assessment

To rate the severity of depression in patients who are already diagnosed as depressed, administer this questionnaire. The higher the score, the more severe the depression.

For each item, write the correct number on the line next to the item. (Only one response per item)

1. DEPRESSED MOOD (Sadness, hopeless, helpless, worthless)

0= Absent

1= These feeling states indicated only on questioning

2= These feeling states spontaneously reported verbally

3= Communicates feeling states non-verbally—i.e., through facial expression, posture, voice, and tendency to weep

4= Patient reports VIRTUALLY ONLY these feeling states in his spontaneous verbal and non- verbal communication

2. FEELINGS OF GUILT

0= Absent

1= Self-reproach, feels he has let people down

2= Ideas of guilt or rumination over past errors or sinful deeds

3= Present illness is a punishment. Delusions of guilt

4= Hears accusatory or denunciatory voices and/or experiences threatening visual hallucinations

3. SUICIDE

0 = Absent

1 = Feels life is not worth living

2 = Wishes he were dead or any thoughts of possible death to self

3 = Suicidal ideas or gesture

4 = Attempts at suicide (any serious attempt rates 4)

4. INSOMNIA EARLY

0 = No difficulty falling asleep

1 = Complains of occasional difficulty falling asleep—i.e., more than 1/2 hour

2 = Complains of nightly difficulty falling asleep

5. INSOMNIA MIDDLE

0= No difficulty

1= Patient complains of being restless and disturbed during the night

2= Waking during the night—any getting out of bed rates 2 (except for purposes of voiding)

6. INSOMNIA LATE

0= No difficulty

1= Waking in early hours of the morning but goes back to sleep

2= Unable to fall asleep again if he gets out of bed

7. WORK AND ACTIVITIES

0= No difficulty

1= Thoughts and feelings of incapacity, fatigue or weakness related to activities; work or hobbies

2= Loss of interest in activity; hobbies or work—either directly reported by patient, or indirect in listlessness, indecision and vacillation (feels he has to push self to work or activities)

3= Decrease in actual time spent in activities or decrease in productivity

4= Stopped working because of present illness

8. RETARDATION: PSYCHOMOTOR (Slowness of thought and speech; impaired ability to concentrate; decreased motor activity)

0= Normal speech and thought

1= Slight retardation at interview

2= Obvious retardation at interview

3= Interview difficult

4= Complete stupor

9. AGITATION

0= None

- 1= Fidgetiness
- 2= Playing with hands, hair, etc.
- 3= Moving about, can't sit still
- 4= Hand wringing, nail biting, hair-pulling, biting of lips

10. ANXIETY (PSYCHOLOGICAL)

- 0= No difficulty
- 1= Subjective tension and irritability
- 2= Worrying about minor matters
- 3= Apprehensive attitude apparent in face or speech
- 4= Fears expressed without questioning

11. ANXIETY SOMATIC: Physiological concomitants of anxiety, (i.e., effects of autonomic overactivity, "butterflies," indigestion, stomach cramps, belching, diarrhea, palpitations, hyperventilation, paresthesia, sweating, flushing, tremor, headache, urinary frequency). Avoid asking about possible medication side effects (i.e., dry mouth, constipation)

- 0= Absent
- 1= Mild
- 2= Moderate
- 3= Severe
- 4= Incapacitating

12. SOMATIC SYMPTOMS (GASTROINTESTINAL)

- 0= None
- 1= Loss of appetite but eating without encouragement from others. Food intake about normal
- 2= Difficulty eating without urging from others. Marked reduction of appetite and food intake

13. SOMATIC SYMPTOMS GENERAL

0= None

1= Heaviness in limbs, back or head. Backaches, headache, muscle aches. Loss of energy and fatigability

2= Any clear-cut symptom rates 2

14. GENITAL SYMPTOMS (Symptoms such as: loss of libido; impaired sexual performance; menstrual disturbances)

0= Absent

1= Mild

2= Severe

15. HYPOCHONDRIASIS

0= Not present

1= Self-absorption (bodily)

2= Preoccupation with health

3= Frequent complaints, requests for help, etc.

4= Hypochondriacal delusions

16. LOSS OF WEIGHT

A. When rating by history:

0= No weight loss

1= Probably weight loss associated with present illness

2= Definite (according to patient) weight loss

3= Not assessed

17. INSIGHT

0= Acknowledges being depressed and ill

1= Acknowledges illness but attributes cause to bad food, climate, overwork, virus, need for rest, etc.

2= Denies being ill at all

18. DIURNAL VARIATION

A. Note whether symptoms are worse in morning or evening. If NO diurnal variation, mark none

0= No variation

1= Worse in A.M.

2= Worse in P.M.

B. When present, mark the severity of the variation. Mark "None" if NO variation

0= None

1= Mild

2= Severe

19. DEPERSONALIZATION AND DEREALIZATION (Such as: Feelings of unreality; Nihilistic ideas)

0= Absent

1= Mild

2= Moderate

3= Severe

4= Incapacitating

20. PARANOID SYMPTOMS

0= None

1= Suspicious

2= Ideas of reference

3= Delusions of reference and persecution

21. OBSESSIONAL AND COMPULSIVE SYMPTOMS

0= Absent

1= Mild

2= Severe

HAM-D Scoring Instructions:

Sum the scores from the first 17 items.

- 0-7 = Normal
- 8-13 = Mild Depression
- 14-18 = Moderate Depression
- 19-22 = Severe Depression
- ≥ 23 = Very Severe Depression

Hamilton, M: A rating scale for depression, *Journal of Neurology, Neurosurgery, and Psychiatry* 23:56-62, 1960

2.INVESTIGATIONS BASED ON SIDDHA SYSTEM:

1. Naadi
2. Sparisam
3. Naa
4. Niram
5. Mozhi
6. Vizhi
7. Malam
8. Moothiram

• Neerkkuri:

• Neikkuri:

3.INVESTIGATION:

BLOOD:

- Hb
- Total WBC Count
- DC
 - Polymorphs
 - Lymphocytes
 - Eosinophils
 - Monocytes
 - Basophils
- Total RBC count

- ESR
 - ½ Hr: 1 Hr:
- Blood sugar
 - Fasting: PP:
- Serum cholesterol

URINE

- Albumin
- Sugar(F) (PP)
- Deposits

RENAL FUNCTION TESTS

- Blood Urea
- Serum Creatinine
- Uric acid

LIVER FUNCTION TESTS

- Serum total bilirubin
- Direct bilirubin
- Indirect bilirubin
- Serum Alkaline phosphatases
- SGOT
- SGPT

PRIMARY OUTCOME:

- Reduction in the symptoms of Depression.

DATA COLLECTION:

Required information were collected from each patient by using the following forms

FORMS:

- FORM I - Screening and selection Proforma
- FORM II - Clinical assessment Proforma
- FORM III - Laboratory investigation Proforma
- FORM IV - Drug compliance form
- FORM V - Patient information sheet

- FORM VI - Consent form
- FORM VII - Withdrawal form/Pharmacovigilance
- FORM VIII - Dietary Advice form

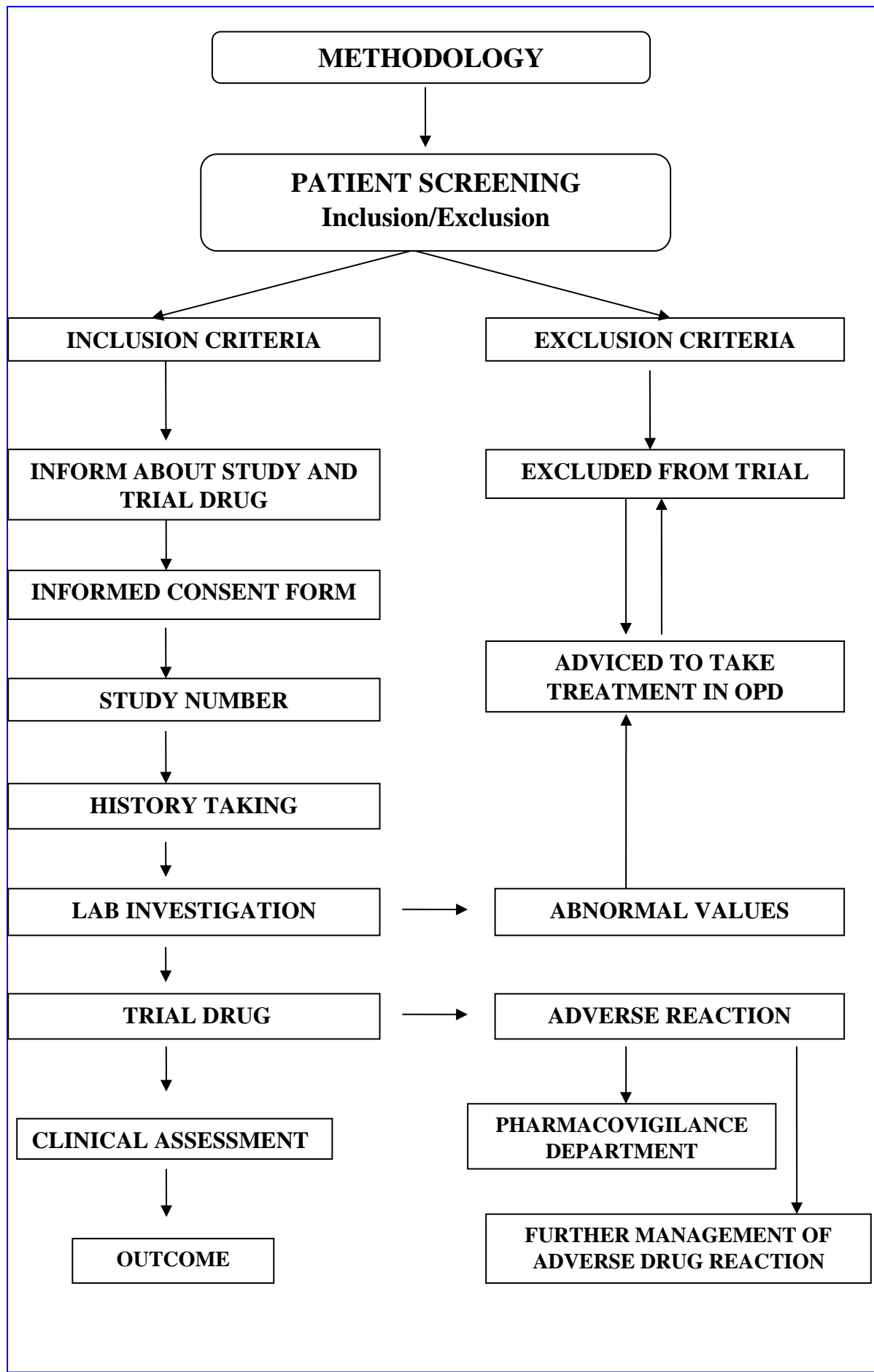
STUDY ENROLLMENT:

- In this study, patients reporting at the OPD with symptoms of depressed mood, fatigue, loss of interest, suicidal thoughts, insomnia, hypersomnia were examined clinically for enrolling in the study based on inclusion and exclusion criteria.
- The patients who are enrolled were informed (Form VI) about the study, trial drug, possible outcomes and the objectives of the study in the language and terms understandable to them and the informed consent would be obtained in writing from them in the consent form (Form VI).
- All these patients were given unique registration card in which the patients Registration number of the study, Address, Phone number and Doctors phone number etc. will be given, so as to report easily should any complications arise.
- Complete clinical history, complaints, duration, examination findings and laboratory investigations -- were recorded in the prescribed Proforma.
- Screening Form- I were filled up: Form –II and Form –III were used for recording the patient's history, clinical examination of symptoms, signs and laboratory investigations respectively. Patients were advised to take the trial drug and appropriate dietary advice would be given according to the patients' perfect understanding.

CONDUCT OF THE STUDY:

- Three days before the treatment, purgation therapy had given with Meganatha Kulikai-2 in the early morning with Inji chaaru (ginger juice) for normalising the vital humours. Then the trial Medicines "*Thirutharakchatha chooranam*" (internal) and "*Aruganver Thylam*" (external) was given for 48 days.
- Among the 30 patients, 15 patients were received trial the medicines only and the remaining (randomised) 15 patients were received the prescribed *Yogam therapy* along with trial medicines.
- The patients are requested to visit the hospital OPD once in 7 days for 48 days. In each and every visit the patients received trial medicines and also underwent clinical assessment and the prognosis were recorded with the supervision of the Faculty member.

- The each randomised selected 15 patients (2,5,7,8,10,13,14,18,19,21,23,26,27,29,30) were received the Yogam therapy for 3 times per week from the 2nd visit for the trial medicine to 7th visit.
- Laboratory investigations were done before and after the trial. At the end of the trial, the patients were advised to visit the OPD for further 2 months for follow-up for any recurrence. Defaulters had not allowed to continue and withdrawn from the study with fresh case had being inducted.



ADVERSE/SERIOUS EFFECTS MANAGEMENT:

- In this study, no adverse events were observed during the course of the treatment and follow-up periods.

DATA ANALYSIS:

- After enrolled the patients in the study, a separate file for each patient was maintained and all forms were kept in the file.
- Study number and patient's number were entered on the top of the file for easy identification.
- Whenever the patients visit to OPD during the study period, the necessary entries were made at the assessment forms.
- The screening forms were filled separately.
- All forms were further scrutinized by Senior Research Officer (Statistics) for logical errors and incompleteness of data to avoid any bias.
- No modification in the results is permitted for unbiased reports. The software of SPSS will be used for data analysis.

RESULTS OF PRECLINICAL STUDY:

1) BIO-CHEMICAL AND ELEMENTAL ANALYSIS OF TRIAL MEDICINE

Qualitative Analysis

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	Appearance of the sample	Greenish Brown in Colour	
2.	Solubility a. A little of the sample is shaken well with distilled water. b. A little of the sample is Shaken well with con. Hcl Con. H ₂ SO ₄ .	Completely soluble Completely soluble	Absence of Silicate
3.	Action of Heat A small amount of the sample is taken in a dry test tube and heated gently at first and then Strong.	White fumes not evolved Brown fumes not evolved	Absence of Carbonate. Absence of Nitrate
4.	Flame Test A small amount of the sample is made into a paste with con. Hcl in a watch glass and introduced into non-luminous part of the Bunsen flame.	White flame is appeared	Absence of Copper
5.	Ash Test A filter paper is soaked into a mixture of sample and cobalt nitrate solution and introduced into the Bunsen flame and ignited	No Yellow colour flame	Absence of Sodium.

PREPARATION OF EXTRACT

5 gm of *THIRUTHARAKCHATHA CHOORANAM* was weighed accurately and placed in a 250 ml clean beaker. Then 50 ml distilled water was added and dissolved well. Then it is boiled well for about 10 minutes. It was cooled and filtered in a 100 ml volumetric flask and then it was made up to 100 ml with distilled water. This fluid was taken for analysis.

1.TEST FOR ACID RADICALS:

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	Test for Sulphate: a. 2 ml of the above prepared extract is taken in a test tube to this added 2ml of 4% ammonium oxalate solution. b. 2ml of the above prepared extract is added with 2 ml of dilHcl is added until the effervescence ceases off. Then 2ml of Barium chloride solution is added.	Cloudy appearance present A white precipitate insoluble in con. Hcl is obtained	presence of sulphate
2.	Test for Chloride: 2 ml of the above prepared Extract is added with dil. HNO ₃ till the effervescence ceases. Then 2 ml of silver nitrate solution is added.	No Cloudy appearance present (Mild trace element)	Absence of chloride
3.	Test for Phosphate: 2 ml of the extract is treated with 2ml of ammonium molybdate solution and 2 ml of con. HNO ₃	Cloudy yellow appearance	Presence of phosphate
4.	Test for Carbonate:	cloudy appearance	Presence of Carbonate.

	2ml of the extract is treated with 2ml magnesium sulphate solution		
5.	Test for Nitrate: 1gm of the substance is heated with copper turnings and concentrated H ₂ SO ₄ and viewed the test tube vertically down.	Brown gas is not evolved	Absence of nitrate
6.	Test for Sulphide: 1 gm of the substance is treated with 2ml of con. HCl.	No rotten egg smelling gas evolved	Absence of sulphide
7.	Test for Fluoride and oxalate: 2 ml of The Extract Is Added With 2ml of Acetic Acid and 2 ml calcium Chloride solution and heated.	No cloudy appearance	Absence of fluoride and oxalate
8.	Test for Nitrate: 3 drops of extract is placed on a filter paper, on that 2 drops of acetic Acid and 2 drops of benzidine solution is placed.	No characteristic changes	Absence of nitrate
9.	Test for Borate: 2 pinches of the substance are made into paste by using sulphuric acid and alcohol (95%) and introduced into the blue flame		Absence of borate

II. TEST FOR BASIC RADICALS

S.no	EXPERIMENT	OBSERVATION	INFERENCE
1.	Test for Lead: 2 ml of the extract is added with 2 ml of potassium iodide solution.	No Yellow precipitate is obtained	Absence of Lead.
2.	Test for Copper: a. One pinch of substance is made into paste with con. HCl in a watch glass and introduced into the non-luminous part of the flame. b. 2 ml of extract is added with excess of ammonia solution.	Blue colour flame precipitate No Blue colour precipitate	Presence of Copper. Absence of Copper.
3.	Test For Aluminium: Take the 2 ml of the extract sodium hydroxide is added in drops to excess.	No characteristic changes	Absence of Aluminium.
4.	Test For Iron (Ferrous) : To the 2 ml of extract 2 ml ammonium thiocyanate solution and 2 ml of con. HNO ₃ is added.	Blood red colour Appearance	Presence of Iron.
5.	Test For Zinc: To 2 ml of the extract sodium hydroxide solution is added in drops to excess.	White precipitate is not Formed	Absence of Zinc.
6.	Test For Calcium: To 2 ml of the extract is added with 2 ml of 4% ammonium oxalate Solution.	Cloudy appearance and white precipitate is obtained	Presence of Calcium

7.	Test For Magnesium: To 2ml of extract sodium hydroxide solution is added in drops to excess.	White precipitate is not obtained.	Absence of Magnesium
8.	Test For Ammonium: To 2ml of extract few ml of Nessler's reagent and excess of sodium hydroxide solution are added	No brown colour appeared	Absence of Ammonium
9.	Test For Potassium: A pinch of substance is treated with 2ml of sodium nitrite solution and then treated with 2ml of cobalt nitrate in 30% glacial acetic acid.	Yellowish precipitate is obtained	Presence of pottassium
10.	Test For Sodium: 2 pinches of the substance is made into paste by using HCL and introduced into the blue flame of Bunsen burner.	No Yellow Color Flame appeared.	Absence of Sodium.
11.	Test For Mercury: 2 ml of the extract is treated with 2ml of sodium hydroxide solution.	Yellow precipitate is not obtained	Absence of Mercury.
12.	For Arsenic Test: 2 ml of the extract is treated with 2ml of sodium hydroxide solution.	No brownish red Precipitate is obtained	Absence of Arsenic.

III. MISCELLANEOUS:

S.NO	EXPERIMENT	OBSERVATION	INFERENCE
1.	Test for Starch: 2 ml of extract is treated with weak iodine solution.	blue colour developed	Presence of Starch.
2.	Test For Reducing Sugar: 5 ml of Benedict's qualitative solution is taken in a test tube and allowed to boil for 2 minutes and added 8 to 10 drops of the extract and again boil it for 2 minutes. The colour changes are noted.	Brick red colour developed	Presence of Reducing sugar.
3.	Test For The Alkaloids: a. 2ml of the extract is treated with 2 ml of potassium Iodide solution. b. 2ml of extract is treated with 2ml of picric acid. c. 2ml of the extract is treated with 2ml of phosphotungstic acid.	Red colour developed Trace Yellow colour developed White precipitate developed	Presence of Alkaloid. Trace of Alkaloid present. Presence of Alkaloid.
4.	Test for Tannic Acid: 2 ml of extract is treated with 2ml of ferric chloride solution.	Black precipitate is obtained	Presence of tanin
5.	Test for Unsaturated Compound: To the 2ml of extract 2ml of Potassium Permanganate solution is added.	Potassium Permanganate is not decolourised	Absence of Unsaturated Compound.
6.	Test For Amino Acid: 2 drops of the extract is placed on a filter paper and dried well and 2 ml of biuret reagent is added .	No Violet colour developed	Absence of Amino acids

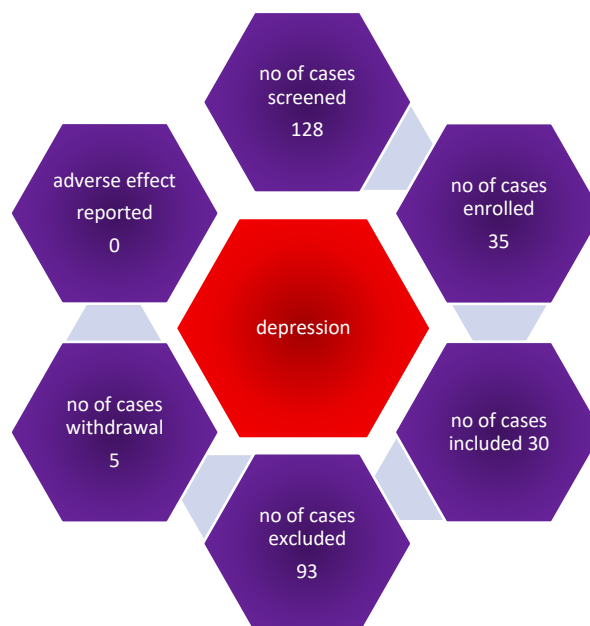
7.	Test For type of Compound: 2ml of the extract is treated with 2 ml of ferric chloride solution.	Green colour developed	Presence of oxy quinole epinephrine and pyro catechol.
		No Red colour developed	Anti pyrine, Aliphatic amino acids and Meconic acid are absent.
		No Violet colour developed	Apomorphine, Salicylate and Resorcinol are absent.
		No blue colour developed	Morphine, Phenol cresol and hydro quinone are absent

Result:

The bio chemical analysis of *Thirutharakchatha chooranam* shown the presents of sulphate, phosphate, carbonate, copper, aluminium, iron, calcium, potassium, starch, reducing sugar, alkaloids, tannic acid.

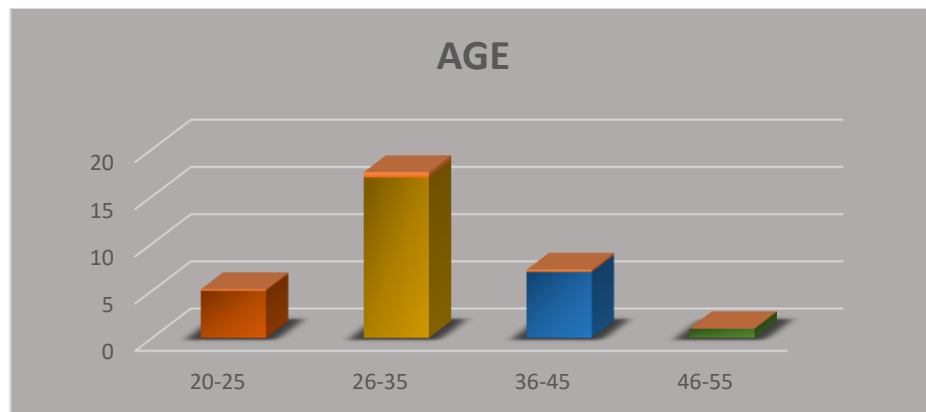
The observation and results were studied and tabulated under the following heading.

- Age and sex
- Occupational Status
- Family History
- Diet Habits
- Thinai Reference
- Kaalam Distribution
- Yakkai Ilakkanam (Physical Constitution)
- Gunam
- Duration of Illness
- Distributions of MuthThodam (Three Humours)
- Udal Kattukkal
- En Vagai Thervugal
- Neerkkuri, Neikkuri
- Haematology General report
- Haematology Biochemistry report
- Urine Analysis
- Result and Statistical Significance of HAM-D score
- Result and Statistical Significance of yogam
- Result and Statistical significance of trail medicine.



1. Age Distribution:

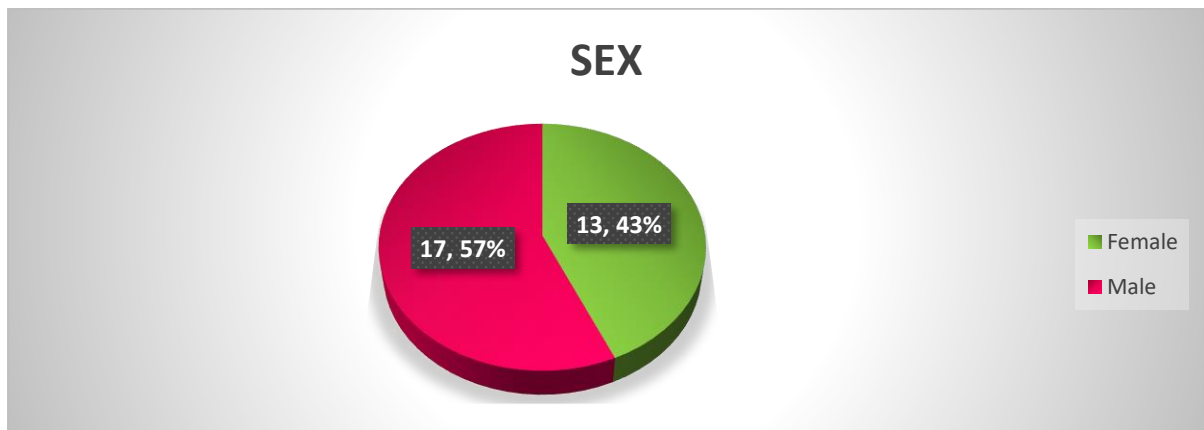
S.NO	AGE	NO OF CASES	PERCENTAGE
1.	20-25	5	16.6%
2.	26-35	17	56.6%
3.	36-45	7	23.3%
4.	46-55	1	3.3%



Observation: The patients were selected from all age groups as given above and the maximum numbers of patients 17(56.6%) were in the age groups between 26-35.

2. Sex:

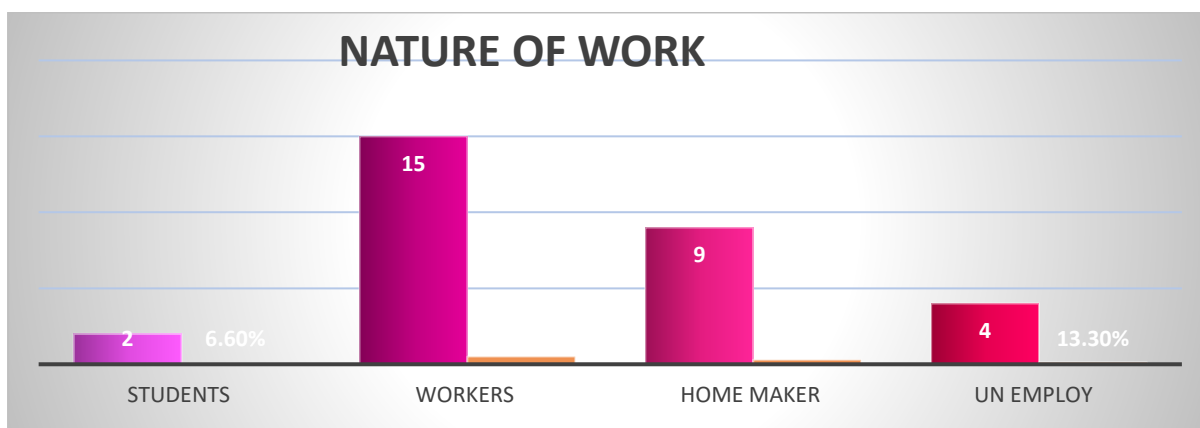
S.NO	SEX	NO OF CASES	PERCENTAGE
1.	Female	13	43.3%
2.	Male	17	56.6%



Observation: Among the 30 patients selected for this study, 57% were males and 43% were females.

3.Occupational:

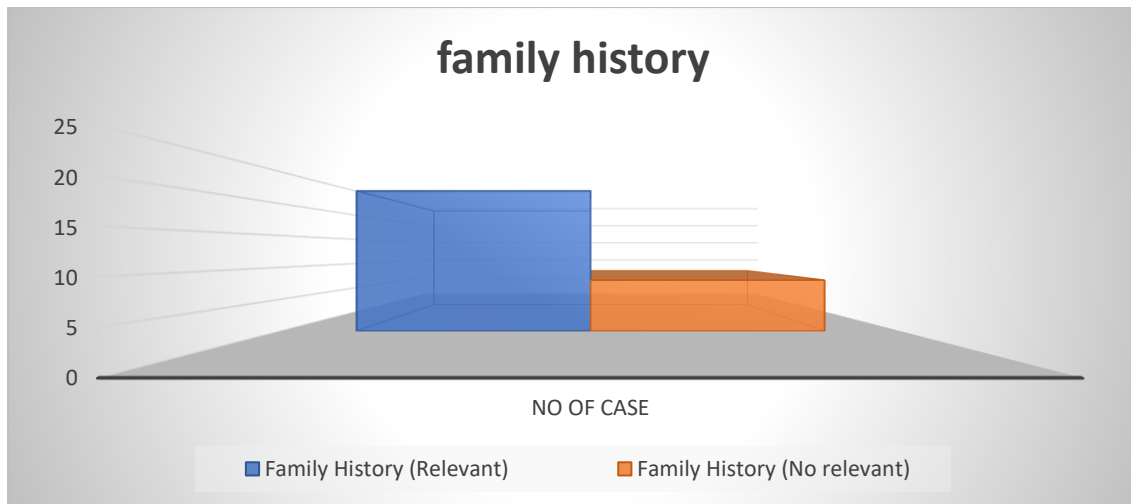
S.NO	NATURE OF WORK	NO OF CASE	PERCENTAGE
1.	Students	2	6.6%
2.	Workers	15	50%
3.	Home maker	9	30%
4.	Un employed	4	13.3%



Observation: The majority of patients in this study were workers, homemaker, unemployed and students.

4.Family history:

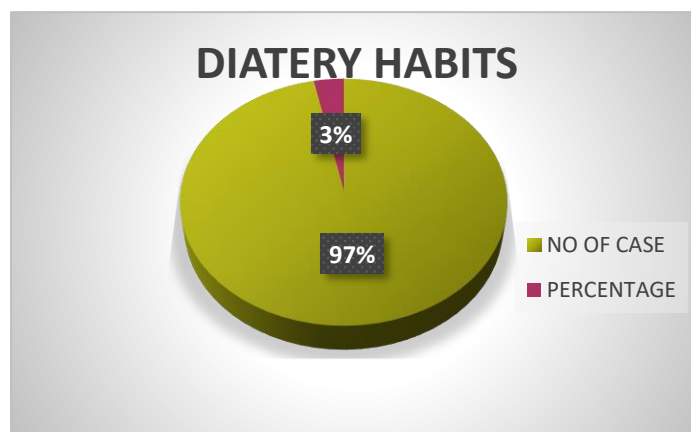
S.NO	CRITERIA	NO OF CASE	PERCENTAGE
1.	Family History (Relevant)	22	73.3%
2.	Family History (No relevant)	8	26.6%



Observation: In this study, 22 number (73.3%) of cases had positive family history.

5. Dietary habits:

S.NO	Dietary habits	NO OF CASE	PERCENTAGE
1.	Vegetarian	3	10%
2.	Non-vegetarian	27	90%

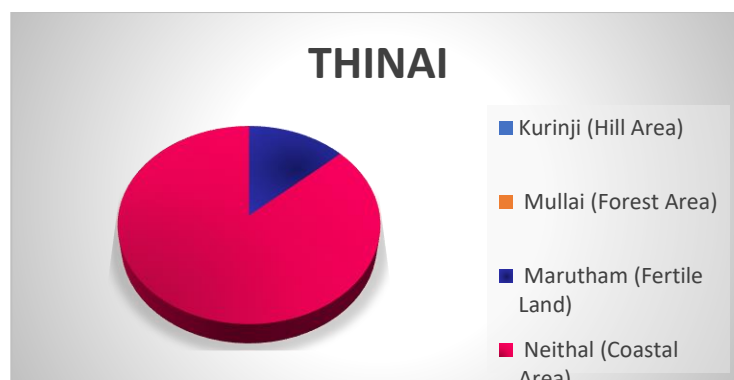


Observation: In this study only 90% of Patients were Non. Vegetarian.

6. Thinaï reference:

S.NO	THINAI	NO OF CASE	PERCENTAGE
1.	Kurinji (Hill Area)	0	0%
2.	Mullai (Forest Area)	0	0%
3.	Marutham (Fertile Land)	4	13.3%

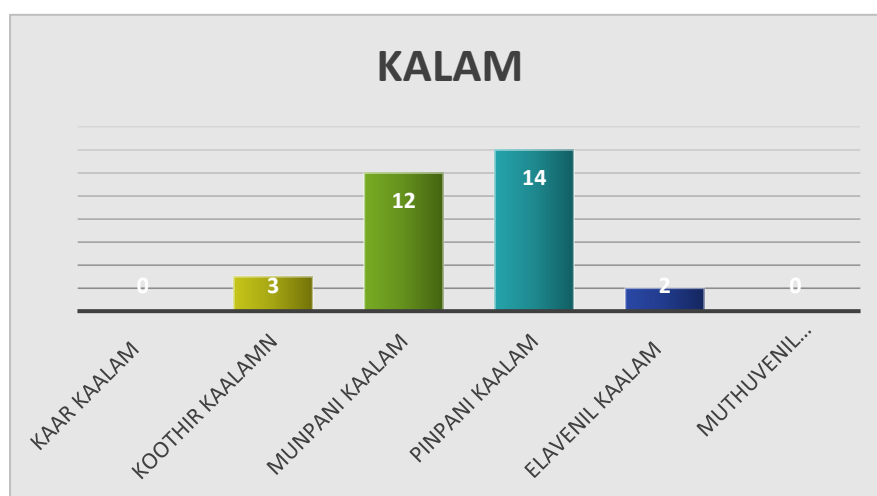
4.	Neithal (Coastal Area)	26	86.6%
5.	Paalai (Desert Land)	0	0%



Observation: In this study 86.6% of the patients were from neithal, 13.3% were from marutham.

7.KALAM DISTRIUBUNCE:

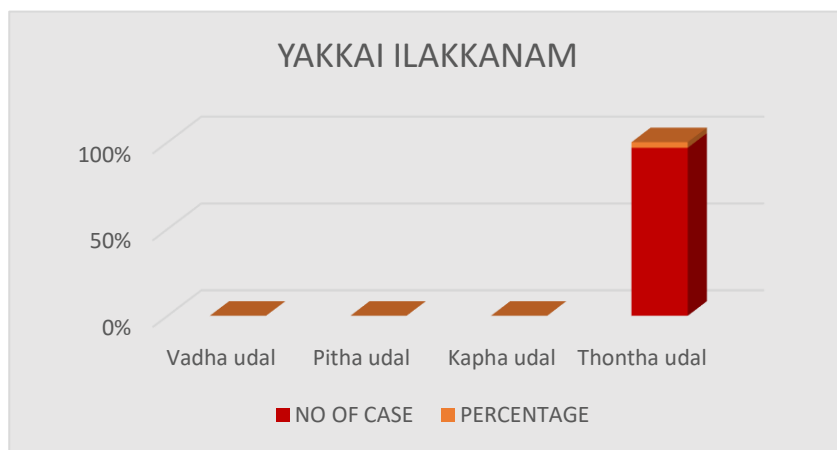
S.NO	KALAM	NO OF CASE	PERCENTAGE
1.	Kaar kaalam	0	0%
2.	Koothir kaalamn	3	10%
3.	Munpani kaalam	12	40%
4.	Pinpani kaalam	14	46.6%
5.	Elavenil kaalam	2	6.6%
6.	Muthuvenil kaalam	0	0%



Observation: Among 30 patients, 65% of patients were comes in Pinpani kaalam 46.6% and 40% Of patients comes in munpani kaalam and 10% of patients in koothir kaalam.

8. Yaakai Ilakkanam (Physical Constitution):

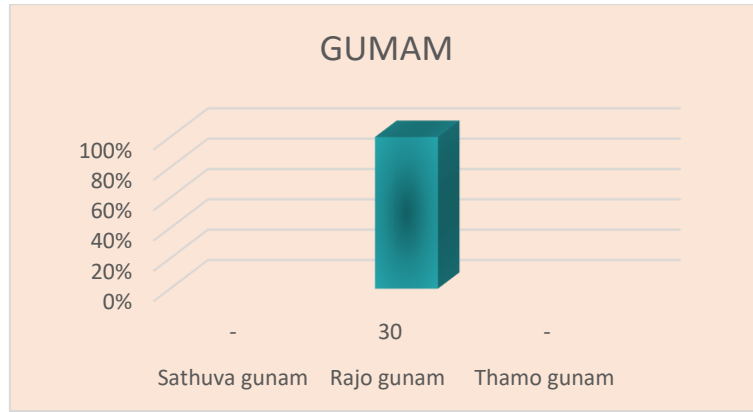
S.NO	YAKKAI ILAKKANAM	NO OF CASE	PERCENTAGE
1.	Vadha udal	0	0%
2.	Pitha udal	0	0%
3.	Kapha udal	0	0%
4.	Thontha udal	30	100%



Observation: All the patients (100%) had ThonthaUdal

9. Gunam (Quality and Characters):

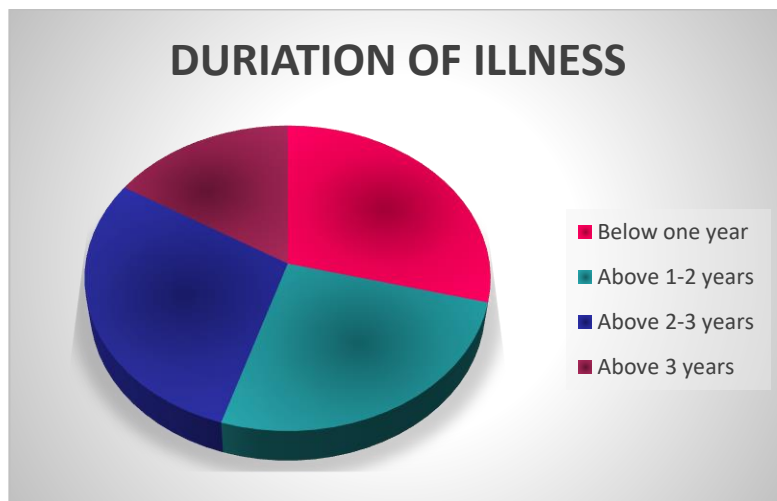
S.NO	GUNAM	NO OF CASE	PERCENTAGE
1.	Sathuva gunam	-	
2.	Rajo gunam	30	100%
3.	Thamo gunam	-	



Observation: All of the patients 30(100 %) had “Rajo Gunam”

10. Duration of Illness:

S.NO	DURIATION OF ILLNESS	NO OF CASE	PERCENTAGE
1.	Below one year	9	30%
2.	Above 1-2 years	8	26.6%
3.	Above 2-3 years	9	30%
4.	Above 3 years	5	16.6%



Observation: Among 30 patients 30% of cases were suffering in the duration of below one year and 2-3 year, 26.6% of cases suffering in the duration of 1-2year, 16.6% were in the duration of above 3 years.

11.Distribution of Mukkutram:

The derangements of Vatham, Piththam and Kabam in viyagula unmatham are as follows

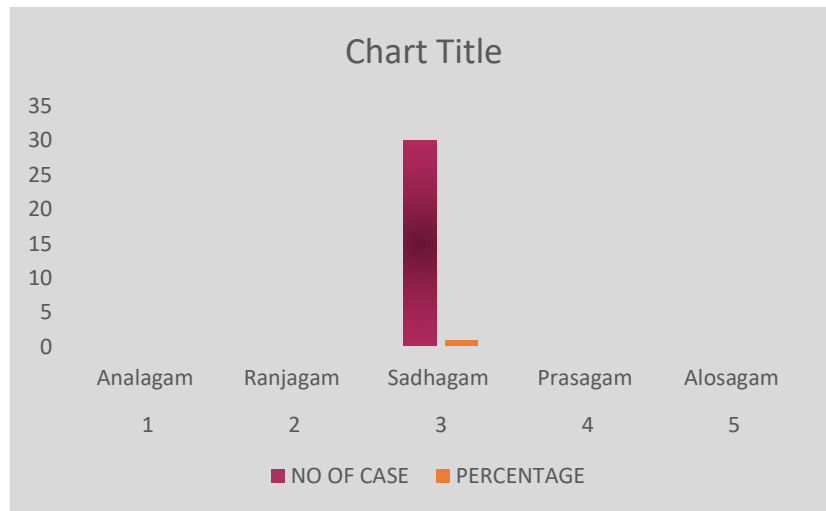
VATHAM:

S.NO	CLASSIFICATION OF VATHAM	NO OF CASE	PERCENTAGE
1.	Pranan	30	100%
2.	Abanan	20	66.6%
3.	Udhanan	0	0%
4.	Samanan	0	0%
5.	Viyanan	0	0%
6.	Naagan	30	100%
7.	Koorman	10	33.3%
8.	Kirukaran	0	0%
9.	Devathaththan	30	100%
10.	Danajeyan	0	-

Observation: Among the 30 cases, pranan, naagan, devathaththan were 100% affected, 65.6% cases were affected abanan and 33.3% cases were affected koorman.

PITHAM:

S.NO	CLASSIFICATION OF MPITHA	NO OF CASE	PERCENTAGE
1.	Analagam	0	0%
2.	Ranjagam	0	0%
3.	Sadhagam	30	100%
4.	Prasagam	0	0%
5.	Alosagam	0	0%



Observation: All of the patients 30(100 %) had “sadhagam” affected

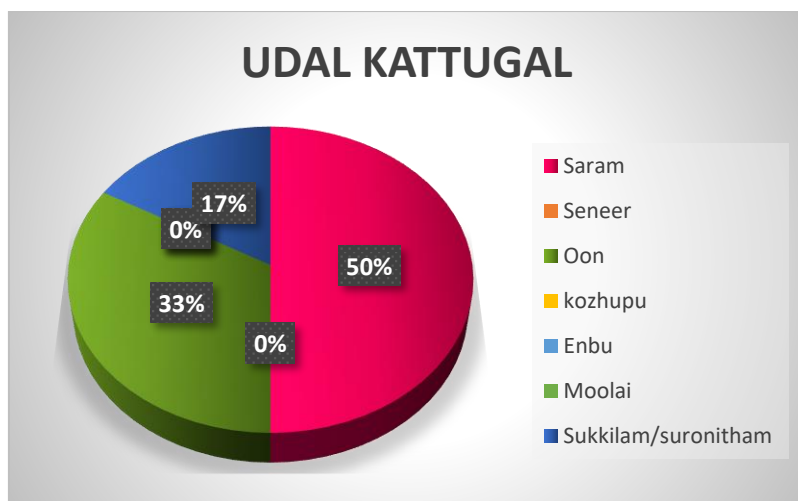
KAPHAM:

S.NO	CLASSIFICATION OF KAPHAM	NO OF CASES	PERCENTAGE
1.	Avalambagam	0	0%
2.	Kilethagam	0	0%
3.	Tharpagam	0	0%
4.	Pothagam	0	0%
5.	Santhigam	16	53.3%

Observation: Among the 30 patients, santhigam were affected 53.3%.

12. UDAL KATTUGAL:

S.NO	UDAL KATTUGAL	NO OF CASE	PERCENTAGE
1.	Saram	30	100%
2.	Seneer	0	0%
3.	Oon	20	66.6%
4.	Kozhupu	0	0
5.	Enbu	0	0
6.	Moolai	0	0
7.	Sukkilam/suronitham	10	33.3%

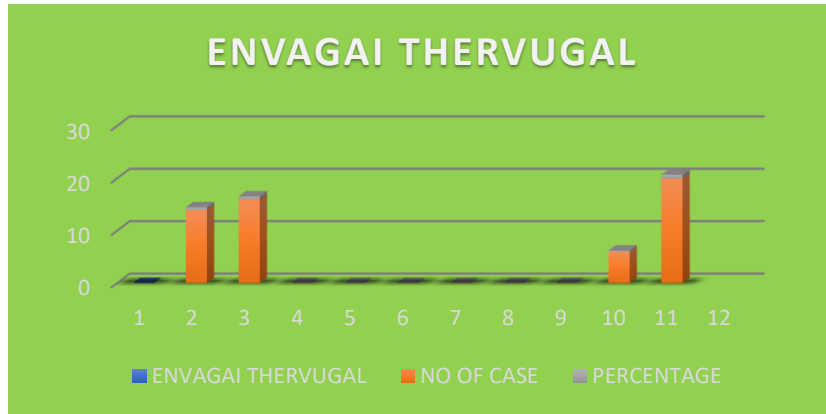


Observa tion: Among 30 patients, Saaram, oon and sukkilam, suronitham were affected in all the cases.

13. EN VAGAI THERVUGAL:

S.NO	ENVAGAI THERVUGAL	NO OF CASE	PERCENTAGE
1.	NAADI:		
	Vatha pitham	14	46.6%
	Pitha vatham	16	53.3%
	Kapha pitham	0	0%
	Kapha vatham	0	0%
2.	Sparisam	0	0%
3.	Naa	0	0%
4.	Niram	0	0%
5.	Mozhi	0	0%
6.	Vizhi	6	20%
7.	Malam	20	66.6%

8th examination discussed separately.



Obsrvation: In Envagai thervugal, the Naadinadai seen in Viyagula unmatham patients were Pithavaatham was affected in 16 (53.3%), Vaathapitham was affected in 14 (46.6 %), malam were affected in 20(66.6%) cases. The rest of the other elements of Envagai thervukal were not affected.

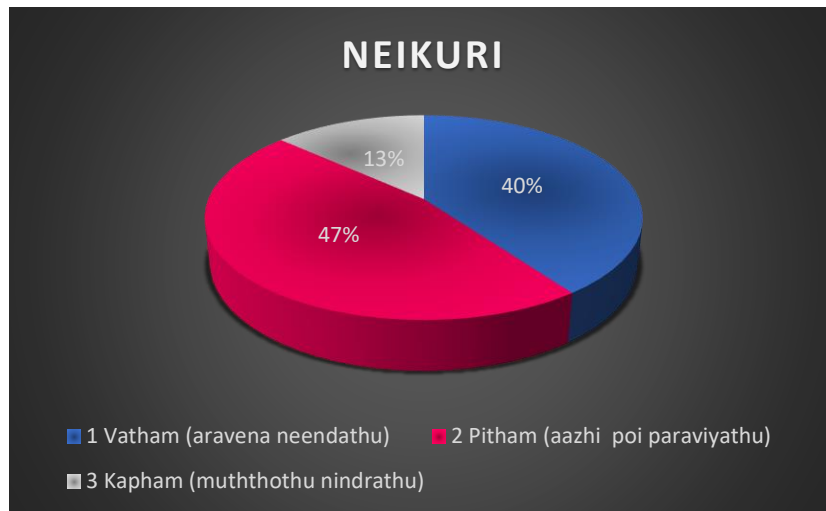
14.NEER KURI & NEI KURI:

A. NEERKURI:

S.NO	TYPE OF TEST	NO OF CASE	PERCENTAGE
1.	Niram (pale yellow)	30	100%

B.NEI KURI:

S.NO	TYPE OF TEST	NO OF CASE	PERCENTAGE
1.	Vatham (aravena neendathu)	12	40%
2.	Pitham (aazhi poi paraviyathu)	14	46.6%
3.	Kapham (muththothu nindrathu)	4	13.3%



INVESTIGATIONS BEFORE AND AFTER TREATMENT(HEMATOLOGY)

S. No	OP. No.	Age/Sex	Hb (gm/dl)		Total RBC count (million/cu.mm)		ESR (mm/hr)		Total WBC (cells/cu.mm)	
			BT	AT	BT	AT	BT	AT	BT	AT
1.	J24573	36/M	13.0	13.2	4.7	4.8	10/22	10/22	9400	9800
2.	J18597	43/M	11.4	11.2	4.1	4.0	10/20	10/20	9000	9000
3.	J20109	20/F	12.7	12.1	4.9	4.8	10/22	10/22	8400	9000
4.	J16543	29/M	16.1	16.0	6.2	5.9	2/4	2/4	5500	5200
5.	J30889	30/F	13.1	13.3	4.3	4.5	8/16	6/14	6100	7500
6.	J65938	26/F	10.2	10.4	4.0	4.1	16/32	16/32	6500	6300
7.	J63427	45/M	15.5	13.8	5.2	4.8	4/8	10/22	5300	9200
8.	G61704	21/F	13.1	13.2	4.9	4.9	4/10	4/8	8400	10200
9.	J80464	33/F	12.6	11.7	4.1	3.9	14/30	14/30	7200	7600
10.	J89702	25/M	15.1	14.1	5.0	5.2	2/4	4/8	5100	10000
11.	J86767	45/F	12.4	12.0	4.2	4.0	12/26	10/20	4500	4500
12.	J45831	38/M	13.7	13.8	5.1	5.2	4/8	4/8	4600	4800
13.	J89037	36/M	13.6	13.8	5.0	5.1	4/10	4/10	12100	12100
14.	J91207	42/M	14.5	14.1	4.9	4.8	6/14	6/12	7700	7800

15.	J27240	24/M	15.4	15.1	5.3	5.2	2/4	2/4	5500	5200
16.	J97649	55/F	13.9	13.4	5.1	5.9	6/12	6/12	9000	9000
17.	K00391	33/F	12.0	118	4.7	4.7	30/66	30/66	14000	11500
18.	J99581	35/F	13.9	14.5	5.0	5.1	4/12	4/8	8500	10300
19.	K00384	27/M	14.7	14.3	4.9	4.8	4/8	10/22	6100	6300
20.	K01901	35/M	15.2	13.7	5.1	4.5	2/4	4/8	6900	9300

INVESTIGATIONS BEFORE AND AFTER TREATMENT(HEMATOLOGY)

S. No	OP no	Age/ Sex	Hb (gm/dl)		Total RBC count (million/ cu.mm)		ESR (mm/hr)		Total WBC (cells/cu.mm)	
			BT	AT	BT	AT	BT	AT	BT	AT
21.	H81102	43/F	11.0	9.5	4.1	3.6	30/62	30/66	8400	7000
22.	K12855	28/M	13.9	14.2	4.4	4.7	2/4	16/32	10700	8000
23.	K07097	25/F	12.3	12.4	4.6	4.6	10/22	10/22	9100	8900
24.	J56993	30/M	15.0	14.4	5.2	5.0	16/34	16/32	8400	6600
25.	K13418	33/F	13.3	13.9	4.5	4.8	10/22	10/22	9200	5200
26.	I96488	27/M	14.3	14.2	4.8	4.8	4/8	4/8	9400	9000
27.	J92947	32/M	14.4	14.7	5.0	5.2	4/8	4/8	6800	7400
28.	K12113	30/F	12.4	12.8	4.0	4.2	20/42	22/42	8800	9000
29.	K15768	26/M	13.7	15.5	4.5	4.8	30/66	4/8	8600	10200
30.	K03174	40/M	13.7	13.8	4.7	4.2	30/62	30/66	5700	5200

INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

S.No	OP. No	Age/ Sex	SGOT		SGPT		Alkaline phosphatase	
			BT	AT	BT	AT	BT	AT
1.	J24573	36/M	20	16	14	11	72	60
2.	J18597	43/M	15	20	07	17	40	68
3.	J20109	20/F	07	10	10	12	88	93
4.	J16543	29/M	25	28	12	17	59	55
5.	J30889	30/F	12	20	05	25	64	66
6.	J65938	26/F	12	12	06	10	53	64
7.	J63427	45/M	33	30	49	45	50	67
8.	G61704	21/F	26	15	58	21	91	82
9.	J80464	33/F	16	19	17	27	53	51
10.	J89702	25/M	24	23	17	20	50	60
11.	J86767	45/F	22	25	16	16	74	70
12.	J45831	38/M	25	25	33	30	76	80
13.	J89037	36/M	16	30	19	25	57	80
14.	J91207	42/M	18	20	15	18	60	72
15.	J27240	24/M	17	20	15	17	78	82
16.	J97649	55/F	16	13	11	15	98	98
17.	K00391	33/F	18	28	39	24	77	80
18.	J99581	35/F	14	20	18	16	71	75
19.	K00384	27/M	16	17	11	13	60	72
20.	K01901	35/M	14	16	28	28	72	75

INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

S. No	OP. No	Age/Sex	SGOT		SGPT		Alkaline phosphatase	
			BT	AT	BT	AT	BT	AT
21.	H81102	43/F	15	15	30	11	53	49
22.	K12855	28/M	47	16	59	20	58	70
23.	K07097	25/F	13	15	07	11	104	105
24.	J56993	30/M	17	14	20	22	96	87
25.	K13418	33/F	14	21	08	19	71	73
26.	I96488	27/M	16	20	20	43	68	72
27.	J92947	32/M	14	18	20	34	60	57
28.	K12113	30/F	17	16	09	10	50	62
29.	K15768	26/M	22	32	14	28	74	85
30.	K03174	40/M	14	18	19	24	91	82

INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

S. No	OP. No	Age/Sex	Total bilirubin		Direct bilirubin		Indirect bilirubin	
			BT	AT	BT	AT	BT	AT
1.	J 24573	36/M	0.5	0.5	0.1	0.2	0.3	0.3
2.	J 18597	43/M	0.9	0.8	0.4	0.4	0.5	0.5
3.	J 20109	20/F	0.4	0.4	0.2	0.1	0.2	0.3
4.	J 16543	29/M	0.3	0.4	0.2	0.2	0.1	0.2
5.	J 30889	30/F	0.3	0.4	0.2	0.2	0.1	0.2
6.	J65938	26/F	0.5	0.5	0.2	0.2	0.3	0.3
7.	J63427	45/M	0.5	0.6	0.1	0.1	0.3	0.4
8.	G61704	21/F	0.2	0.3	0.1	0.1	0.1	0.2
9.	J80464	33/F	0.6	0.4	0.2	0.1	0.4	0.3
10.	J89702	25/M	0.9	0.8	0.4	0.4	0.5	0.5
11.	J86767	45/F	0.3	0.4	0.2	0.1	0.1	0.2
12.	J45831	38/M	1.4	1.2	0.6	0.3	0.8	0.6
13.	J89037	36/M	1.7	1.6	0.5	0.4	1.2	0.7
14.	J91207	42/M	2.2	1.2	0.7	0.7	1.5	1.4
15.	J27240	24/M	0.6	0.6	0.3	0.2	0.3	0.2
16.	J97649	55/F	0.7	0.4	0.3	0.1	0.4	0.3
17.	K00391	33/F	0.3	0.4	0.1	0.2	0.2	0.3
18.	J99581	35/F	0.2	0.6	0.1	0.2	0.1	0.1
19.	K00384	27/M	0.5	0.6	0.2	0.1	0.3	0.4
20.	K01901	35/M	0.4	0.5	0.1	0.1	0.3	0.4

INVESTIGATIONS BEFORE AND AFTER TREATMENT (LIVER FUNCTION TEST)

S. No	OP. No	Age/Sex	Total bilirubin		Direct bilirubin		Indirect bilirubin	
			BT	AT	BT	AT	BT	AT
21.	H81102	43/F	0.7	1.0	0.3	0.4	0.4	0.6
22.	K12855	28/M	0.9	0.6	0.4	0.2	0.5	0.4
23.	K07097	25/F	0.8	0.8	0.3	0.3	0.5	0.5
24.	J56993	30/M	0.6	0.6	0.2	0.2	0.4	0.4
A25.	K13418	33/F	0.7	0.7	0.3	0.3	0.4	0.4
26.	I96488	27/M	1.4	1.2	0.4	0.4	0.9	0.8
27.	J92947	32/M	0.7	0.8	0.3	0.3	0.4	0.5
28.	K12113	30/F	0.6	0.7	0.3	0.3	0.3	0.4
29.	K15768	26/M	0.5	0.6	0.1	0.1	0.4	0.3
30.	K03174	40/M	0.4	0.4	0.6	0.5	0.1	0.2

INVESTIGATIONS BEFORE AND AFTER TREATMENT (RENAL FUNCTION TEST)

S. No	OP. No	Age/Sex	Blood sugar Fasting		Blood sugar Post prandial		urea		Creatinine	
			BT	AT	BT	AT	BT	AT	BT	AT
1.	J 24573	36/M	90	88	124	115	18	15	0.8	1.2
2.	J 18597	43/M	94	90	100	115	25	18	0.7	0.8
3.	J 20109	20/F	100	95	148	135	35	30	0.8	0.8
4.	J 16543	29/M	97	90	96	116	17	20	1.0	1.0
5.	J 30889	30/F	93	81	83	93	11	14	0.9	0.8
6.	J65938	26/F	78	88	95	87	17	15	1.0	0.9
7.	J63427	45/M	105	85	120	110	21	24	1.0	0.8
8.	G61704	21/F	88	92	107	191	19	19	0.8	0.8
9.	J80464	33/F	98	104	104	169	14	13	0.7	0.8
10.	J89702	25/M	89	93	97	118	22	25	0.8	1.0
11.	J86767	45/F	94	85	102	110	14	23	0.8	1.0
12.	J45831	38/M	105	93	93	115	13	20	1.0	0.8
13.	J89037	36/M	107	105	129	127	19	19	0.8	0.7
14.	J91207	42/M	92	95	117	123	11	15	0.9	0.7
15.	J27240	24/M	115	105	117	127	12	15	1.1	0.9
16.	J97649	55/F	97	101	124	130	17	15	0.8	0.7
17.	K00391	33/F	97	104	139	124	20	19	0.9	0.6
18.	J99581	35/F	82	98	106	119	19	24	1.0	0.8
19.	K00384	27/M	88	93	109	125	15	23	1.2	0.9
20.	K01901	35/M	95	83	148	140	27	32	0.9	0.7

INVESTIGATIONS BEFORE AND AFTER TREATMENT (RENAL FUNCTION TEST)

S. No	OP. No	Age/Sex	blood sugar fasting		Blood sugar Post prandial		Urea		Creatinine	
			BT	AT	BT	AT	BT	AT	BT	AT
21.	H81102	43/F	94	107	98	102	15	16	0.8	0.9
22.	K12855	28/M	116	121	129	115	24	13	1.0	1.1
23.	K07097	25/F	95	86	96	114	13	18	0.8	0.9
24.	J56993	30/M	96	125	124	136	18	21	1.3	1.3
25.	K13418	33/F	95	104	137	104	12	12	0.8	0.9
26.	I96488	27/M	101	111	132	127	21	22	1.1	1.1
27.	J92947	32/M	95	105	128	116	19	16	1.2	1.1
28.	K12113	30/F	101	95	121	115	25	20	0.8	0.7
29.	K15768	26/M	83	90	118	123	39	25	1.1	0.8
30.	K03174	40/M	85	124	96	121	18	25	1.3	0.9

INVESTIGATIONS BEFORE AND AFTER TREATMENT (RENAL FUNCTION TEST)

S. No	OP. No	Age /Sex	Urine sugar fasting		Urine sugar Postprandial		albumin		deposits			
			BT	AT	BT	AT	BT	AT	Epithelial cells		Pus cells	
									BT	AT	BT	AT
1.	J 24573	36/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
2.	J 18597	43/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	2-4	1-2
3.	J 20109	20/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
4.	J 16543	29/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
5.	J 30889	30/F	NIL	NIL	NIL	NIL	NIL	NIL	2-4	2-4	1-2	1-2
6.	J65938	26/F	NIL	NIL	NIL	NIL	NIL	NIL	3-5	6-8	3-5	2-4
7.	J63427	45/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
8.	G61704	21/F	NIL	NIL	NIL	NIL	NIL	NIL	2-4	1-2	3-5	1-2
9.	J80464	33/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	2-3	2-3	2-3
10.	J89702	25/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
11.	J86767	45/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
12.	J45831	38/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-3	2-4
13.	J89037	36/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
14.	J91207	42/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-3	3-5	1-3
15.	J27240	24/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	1-2
16.	J97649	55/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-3	1-2	1-3
17.	K00391	33/F	NIL	NIL	NIL	NIL	NIL	NIL	2-4	2-4	2-4	2-4
18.	J99581	35/F	NIL	NIL	NIL	NIL	NIL	NIL	2-3	2-4	2-4	1-2
19.	K00384	27/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-3	1-2	1-2
20.	K01901	35/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	4-6	3-4

INVESTIGATIONS BEFORE AND AFTER TREATMENT (RENAL FUNCTION TEST)

S. No	OP. No	Age/Sex	Urine sugar fasting		Urine sugar Post prandial		albumin		deposits			
									Epithelial cells		Pus cells	
			BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
21.	H81102	43/F	NIL	NIL	NIL	NIL	NIL	NIL	3-5	1-2	1-2	1-2
22.	K12855	28/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	3-5	3-5
23.	K07097	25/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	2-4	1-2	2-4
24.	J56993	30/M	NIL	NIL	NIL	NIL	NIL	NIL	2-4	2-4	2-4	2-4
25.	K13418	33/F	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-3	2-3	4-6
26.	I96488	27/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	2-4	1-2
27.	J92947	32/M	NIL	NIL	NIL	NIL	NIL	NIL	1-2	1-2	1-2	2-4
28.	K12113	30/F	NIL	NIL	NIL	NIL	NIL	NIL	1-3	1-3	1-3	1-2
29.	K15768	26/M	NIL	NIL	NIL	NIL	NIL	NIL	2-4	1-2	2-4	1-2
30.	K03174	40/M	NIL	NIL	NIL	NIL	NIL	NIL	1-4	1-2	3-5	1-4

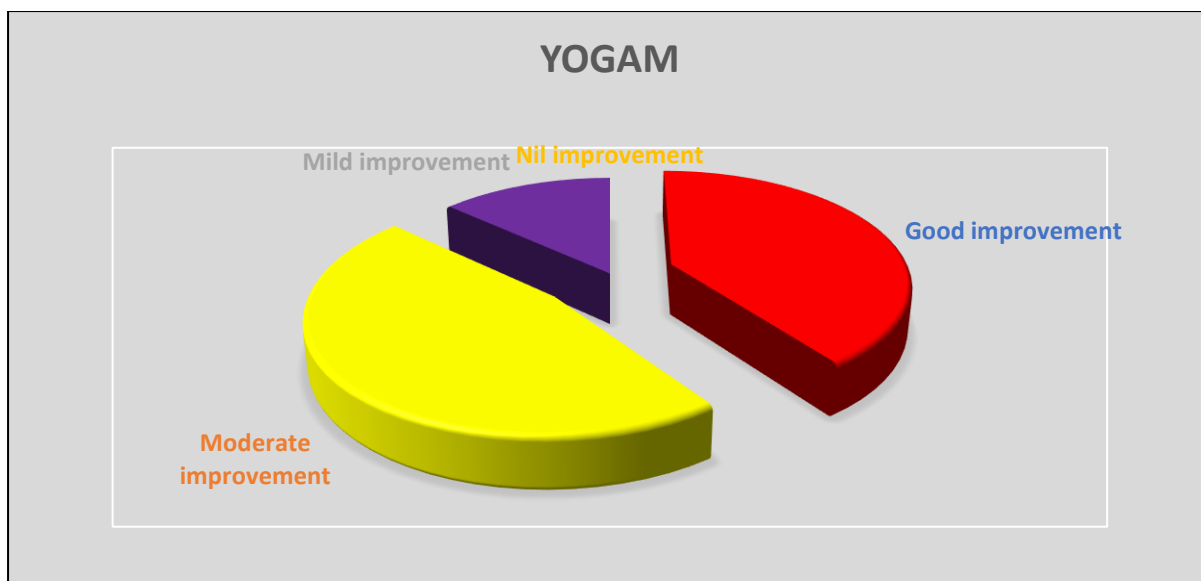
19. RESULTS AND STATISTICAL ANALYSIS:

All collected data were entered into MS Excel software using different columns as variables and rows as patients. SPSS software was used to perform statistical analysis. Basic descriptive statistics include frequency distributions and cross-tabulations were performed. The quantity variables were expressed as Mean \pm Standard Deviation and qualitative data as percentage. A probability value of <0.05 was considered to indicate as statistical significance. Paired 't' test was performed for determining the significance between before and after treatment.

Yogam improvement before and after treatment:

S.NO	OP. NO	AGE/SEX	BT	AT	RESULT
1.	J18597	43/M	18	9	Moderate
2.	J 30889	30/F	22	9	Moderate
3.	J63427	45/M	13	8	Moderate
4.	G61704	21/F	16	7	Good
5.	J89702	25/M	13	5	Good
6.	J89037	36/M	12	8	Moderate
7.	J99581	35/F	17	14	Mild
8.	K00384	27/M	16	7	Good
9.	K07097	25/F	16	6	Good
10.	I96488	27/M	12	4	Good
11.	J92947	32/M	16	9	Moderate
12.	K15768	26/M	17	9	Moderate
13.	K03174	40/M	16	9	Moderate
14.	J91207	42/M	18	16	Mild
15.	H81102	43/F	16	6	Good

S.NO	RESULTS	NO OF CASES	PERCENTAGE
1.	Good improvement	6	40%
2.	Moderate improvement	7	46.66%
3.	Mild improvement	2	13.33%
4.	Nil improvement	0	0%



statistical significant of yogam Before Treatment and After Treatment:

	Mean \pm SD	t Value	p value
Before treatment	15.87 \pm 2.61	9.8885	> 0.0001
After treatment	8.4 \pm 3.13		

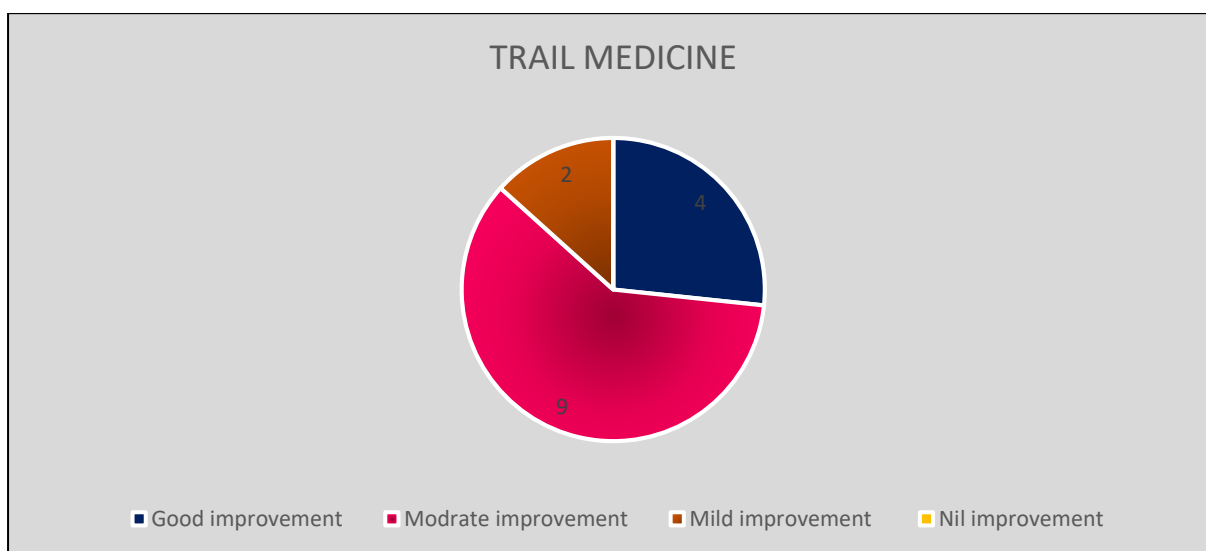
Observation: The mean \pm standard deviation of *yogam therapy* before and after treatment were 15.87 \pm 2.61 and 8.4 \pm 3.13 respectively which is statistically significant ($p < 0.0001$). There is a significant difference between before and after treatment on *yogam therapy* i.e. 47.69 % reduction in *yogam therapy* after the trial.

21.Observation of Trial Medicine before and after treatment:

S.NO	OP. NO	AGE/ SEX	BT	AT	RESULTS
1.	J24573	36/M	18	10	Moderate
2.	J20109	20/F	14	8	Moderate
3.	J16543	29/M	14	10	Moderate
4.	J65938	26/F	16	11	Moderate
5.	J80464	33/F	12	6	Good
6.	J86767	45/F	18	11	Moderate
7.	J45831	38/M	12	9	Moderate
8.	J27240	24/M	16	13	Moderate
9.	J97649	55/F	15	3	Good
10.	K00391	33/F	18	5	Good

11.	K01901	35/M	18	9	Moderate
12.	K12855	28/M	13	2	Good
13.	J56993	30/M	19	14	Mild
14.	K13418	33/F	14	8	Moderate
15.	K12113	30/F	17	14	Mild

S.NO	RESULTS	NO OF CASES	PERCENTAGE
1.	Good improvement	4	26.66%
2.	Modrate improvement	9	60%
3.	Mild improvement	2	13.33%
4.	Nil improvement	0	0%



statistical significant of trial medicine(internally&externally) Before Treatment and After Treatment:

	Mean \pm SD	T value	P value
Before treatment	15.6 \pm 2.354	7.9955	> 0.0001
After treatment	8.866 \pm 3.661		

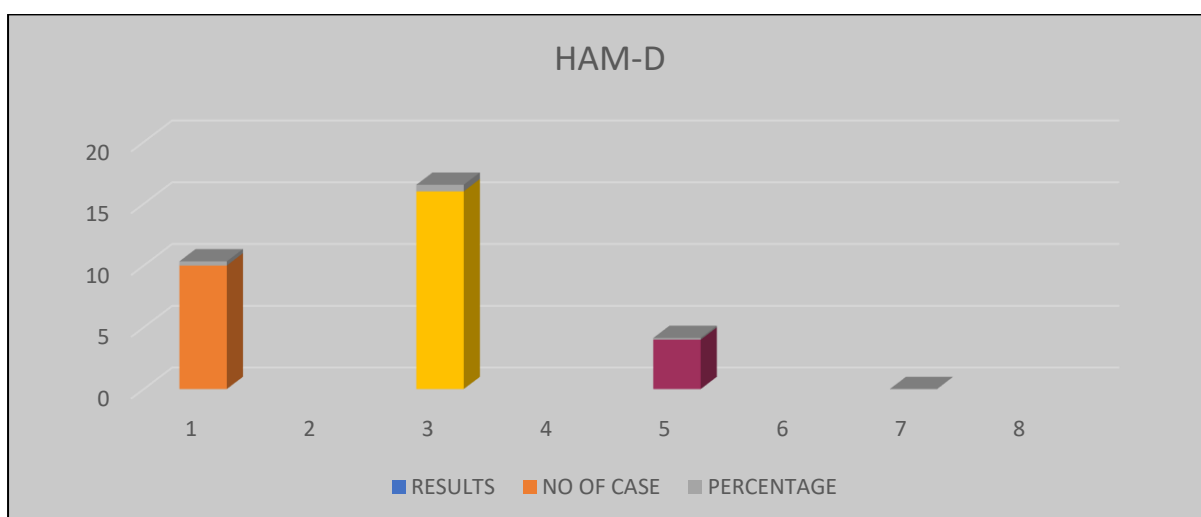
Observation: The mean \pm standard deviation of *medicines* before and after treatment were 15.6 \pm 2.354 and 8.866 \pm 3.661 respectively which is statistically significant ($p < 0.0001$). There is a significant difference between before and after treatment on trial medicine i.e. 43.20 % reduction in medicine after the trial.

HAM-D SCORE BEFORE AND AFTER TREATMENT:

S.NO	OP. NO	AGE/SEX	BT	AT	RESULTS
1.	J24573	36/M	18	10	Moderate
2.	J18597	43/M	18	9	Moderate
3.	J20109	20/F	14	8	Moderate
4.	J16543	29/M	14	10	Moderate
5.	J 30889	30/F	22	9	Moderate
6.	J65938	26/F	16	11	Moderate
7.	J63427	45/M	13	8	Moderate
8.	G61704	21/F	16	7	Good
9.	J80464	33/F	12	6	Good
10.	J89702	25/M	13	5	Good
11.	J86767	45/F	18	11	Moderate
12.	J45831	38/M	12	9	Moderate
13.	J89037	36/M	12	8	Moderate
14.	J91207	42/M	18	16	Mild
15.	J27240	24/M	16	13	Moderate
16.	J97649	55/F	15	3	Good
17.	K00391	33/F	18	5	Good
18.	J99581	35/F	17	14	Mild
19.	K00384	27/M	16	7	Good
20.	K01901	35/M	18	9	Moderate
21.	H81102	43/F	16	6	Good
22.	K12855	28/M	13	2	Good
23.	K07097	25/F	16	6	Good
24.	J56993	30/M	19	14	Mild
25.	K13418	33/F	14	8	Moderate
26.	I96488	27/M	12	4	Good
27.	J92947	32/M	16	9	Moderate
28.	K12113	30/F	17	14	Mild
29.	K15768	26/M	17	9	Moderate

30.	K03174	40/M	16	9	Moderate
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S.NO	RESULTS	NO OF CASE	PERCENTAGE
1.	Good improvement	10	33.3%
2.	Moderate improvement	16	53.3%
3.	Mild improvement	4	13.3%
4.	Nil improvement	0	0%



Paired Sample Statistics (HAM-D Score Before Treatment and After Treatment) :

	Mean \pm SD	t Value	p value
Before treatment	15.60 \pm 2.54	11.4698	>0.0001
After treatment	8.63 \pm 3.36		

Observation The mean \pm standard deviation of HAM-D score at before and after treatment were -15.60 \pm 2.54 and 8.63 \pm 3.36 respectively which is statistically significant ($p < 0.0001$). There is a significant difference between before and after treatment on HAM-D Score i.e. 44.68 % reduction in HAM-D Score after the trial.

DISCUSSION

The Depression is one of the most important psychological problems more common among the population. Majority of them are not seeking the help to proper health care providers due to social stigma in related with psychological illness. Large numbers of patients perceive even the natural physiological function as abnormal. The Depression is rampant among the Indian population and leads to large number of physical and psychological symptoms. Majority of these individuals visit self-claimed psychiatrist and traditional faith healers. The contact with these health providers not only strengthen their misconception and false beliefs, but also compel the patients to pay huge cost of investigations and drugs which are not only non-effective but also hazardous. This may lead them as a patient in physically and mentally. In general practice, most of focus the physicians they attending their patients may missed the underlying psychiatric problems. Hence these kinds of patients get more worsened with their problems and become a mentally affected patient.

The trial drugs were prepared in *Gunapadam* lab of National Institute of Siddha after the authentication of the raw drugs by Assistant professor of Medicinal botany NIS, Chennai. The trial drug was prepared by Standard Operating Procedure as mentioned in the Protocol.

The Bio chemical analysis was done at the biochemistry lab of NIS and the results were documented. The Bio-chemical analysis of *Thirutharakchatha chooranam* had shown the presence of sulphate, chloride, phosphate, carbonate, calcium, aluminium, zinc, magnesium, reducing sugars, iron, tannic acid, starch and alkaloids. The clinical study was conducted with a well-defined protocol and a proper proforma after the approval of Institutional Ethical Committee. For this dissertation study, 30 patients were selected and patients were treated in the OP Department of *Sirappu Maruthuvam*, in Ayothidoss Pandithar Hospital - National Institute of Siddha, Tambaram Sanatorium, Chennai –600 047.

Based on various criteria, the data were collected and tabulated. The criteria were family history, age distribution, occupation, dietary habits and incidence of the disease with reference to *thinai*, seasonal variation, clinical manifestations and assessment of the improvement in the prognosis of the disease with the trial drug.

In Siddha System, it is necessary to bring the vitiated humours to equilibrium. Hence before the treatment *Meganatha Kulikai* with *Inji charu* (*Zingiber officinale*) juice was given

for *Viresanam* (Purgation) in the early morning to normalize the vitiated humours. During the treatment, the patients were advised to follow *pathiyam* (Dietary regimen).

Internal Drug : *Thirutharakchatha chooranam* - 2gm two times per day with ghee

External Drug : *Aruganver Thylam* for oil bath 2 times per week

Duration of Drug : 48 days

30 patients were enrolled for this study, among 30 patients, age group 20 to 25 years were in number 5 (16.6%), patients between 26 to 35 were in number 17 (56.6 %), patients between 36 to 45 years were in number 7 (23.3 %), patients between 45 to 55 years, 1 (3.3%).

Viyagula unmatham commonly appears at young and middle age. In this present study, considerable numbers of patients were reported (17 patients) between the age of 26-35 among study sample.

Among the 30 patients, male cases were reported in number 17(56.6%) and female cases were reported in number 13(43.3%). Usually the studies carried out on depression, proves that female were affected more than male. But the study revealed that, the occurrence more in male than the female due to social stigma and lack of awareness on mental health and cultural practice in the society.

The majority of patients in this study were common workers 15 (50 %), homemakers 9(30%), unemployed 4(13.3%) and students 2(6.6%). Inference of this study shows that, in current scenario employed people are highly exposed to stress often, which is the root cause of depressive disorders.

The most of patients in this study were Non-vegetarian 27 (90%) remaining 3 (10%) patients were vegetarian. Inference of this study, shows that people who are consuming high non-vegetarian diet, gets aggressive behaviour which leads to psychiatric disorders.

In this present study shows, considerable numbers of patients were reported from *neithal* (26 patients), *marutham* (4 patients).

Highest number of patients 14 (46.6%) were studied during *Pinpani Kaalam*, 12 patients (40%) were studied during *Munpani Kaalam*, 3 patients (10%) were studied during *Koothir kaalam* and 2 patients were studied during *Ilavenil kaalam*.

Most of patients 9(30%) were affected in duration of below one year and above 2 to 3 years, 8 (26.6%) patients were affected by the illness from 1 to 2 years, above 3 years were in

same number 5 (12.5%). Laboratory investigations were done for all the cases before and after treatment. There were no variations in hepatic, renal and other parameters.

Among the 30 patients randomized selected 15 patients (2,5,7,8,10,13,14,18,19,21,23,26,27,29,30) received *yogam* along with trial medicines (internally & externally). This *yogam* results shown 6 patients (40% %) is good improvement, 7 patients (46.66%) shown moderate improvement and 2 patients(13.3%)shown mild improvement. Patients who have lot of sadness, lack of concentration and sleep exposed to very poor result and respond, may be this is the effect of *thoekkaminmai* (Insomnia) and more stressful life style. Based on Siddha Literature the one who not maintain the *Naal ozhukkam* (Daily regimen) haven't maintain their good health, this may reflect in this patient.

Remaining 15 patients received only trial medicines (Internally & Externally), without *yogam*. This trial medicine shown results as 4 patients(26.66%)shown good improvement and 9 patients(60%) shown moderate improvement and 2 patients (13.3%) shown mild improvement.

The outcome of this study was clinically observed by HAM-D Score, which showed encouraging results of good improvement in 10 patients (33.3%), moderate improvement in 16 patients (53.3%) and mild improvement in 4 cases (13.3%).

Patients who were received both treatments (*yogam* & trial medicine) had revealed good result and better revealment than the trial medicine taken alone. Based on this it is shown Medicine combined with *Yogam* therapy is more effective and appropriate to treat the *Viyagula Unmatham* (Depression).

In this study, no adverse events were observed during the course of the treatment. After the study period, all the patients were advised to attend Out Patient Department of *Sirappu Maruthuvam* of NIS for further follow-up of 6 months.

SUMMARY

The disease *Viyagula Unmatham* was taken for the clinical study with *Thirutharakchatha chooranam* as internal medicine and *Aruganver Thylam* for external application for oil bath 2 times per week, for the clinical study, 30 cases were selected based on the approved protocol.

The raw drugs were authenticated by the competent authority Medicinal Botany and Gunapadam dept, Botanical Authentication Certificate no: NISMB3382018.

This study has been approved by IEC of NIS [Date of IEC Approval& its number: NIS/IEC/2016/11-12/14.10.2016]. The study is safely executed on patients and there were no adverse drug reactions noted during the study period and further registered Clinical Trail Registry of India [REG. NO. CTRI/2018/04/013421].

Out of 30 cases treated at OPD, of Ayothidoss Pandithar Hospital of National Institute of Siddha, Chennai-47. Randomly selected 15 cases(2,5,7,8,10,13,14,18,19,21,23,26,27,29,30) were received *Yogam* therapy. The detailed study on *Viyagula unmatham* with reference to its aetiology, pathogenesis, investigations, clinical features, diagnosis and treatment with trial drugs was done.

The results were observed by HAM-D score. Among the 30 cases treated, 33.3 % cases had shown good improvement, 53.3 % cases had shown moderate improvement and 13.3% cases had shown mild improvement. Randomised selected 15 patients were received additionally *Yogam* therapy. This revealed 80% of the patients showed more than 50% improvement. Combined trial medicine and *yogam* therapy shown more significant improvements.

CONCLUSION

The present clinical study confirms the efficacy of the trial drug *Thirutharakchatha chooranam* (internal medicine) and *Aruganver thylam* (external medicine) which is Siddha poly herbal formulation. It was found to be better resulting on *Viyagula unmatham* patients in reducing clinical symptoms like depressive mood, loss of sleep and appetite, weight loss, lack of concentration, anhedonia, suicidal thoughts etc. The literature evidence for this drug *Agathiyar Vaithiya Ratna Surukam* page no 45, Publication of *Tanjavur Magaraja Sarabojini Saraswathy Mahal Noolagam*. The quantitative outcome of HAM-D score shows significant reduction between before and after treatment. The qualitative outcome shows there is 33.3 % of cases had shown good improvement and the rest 53.3 % of cases had shown moderate improvement and 13.3% of cases mild improvement. Further the *Yogam* had shown more impressive result of reduction of symptoms of *Viyagula unmatham* (Depression). It shows the better improvement more than 50 % was 26 (86.6 %) patients.

According to this result it could be observed that *yogam* therapy is further given as support to improve the condition of *Viyagula unmatham* (Depression). The Modern Medical concept of Anxiety related somatic complaints or Culture bound syndrome also has to be proven. The clinical trial conducted in selected patients was satisfactory and the results were encouraging. However, a study with large number of patients is required to find out the ideal dose response.

The costs of the trial medicines are comparatively low. The trial medicines are cost effective.

From the above results, the trial drugs “*Thirutharakchatha chooranam*” (Internal Medicine) and “*Aruganver Thylam*” (External Medicine) are responded well in the treatment of *Viyagula unmatham*.

**NATIONAL INSTITUTE OF SIDDHA
AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.**

DEPARTMENT OF SIRAPPU MARUTHUVAM

**COMPARATIVE CLINICAL STUDY OF *THIRUTHARAKCHATHA CHOORANAM*
(INTERNAL), *ARUGANVER THYLAM* (EXTERNAL) IN THE TREATMENT OF
VIYAGULA UNMATHAM (DEPRESSION) WITH AND WITHOUT YOGAM
THERAPY**

Principal Investigator: Dr.S.Siva josyaa

SCREENING & SELECTION PROFORMA

- | | |
|----------------------|----------------------|
| 1. SERIAL NO: | 2. OP /IP NO: |
| 3. NAME: | 4. AGE/GENDER: |
| 5. OCCUPATION: | 6. INCOME: |

INCLUSION CRITERIA

Age: between 20 years and 55 years	Yes/No
Sex: Both male and female	Yes/No
Depressed mood	Yes/No
Reduced level of interest	Yes/No
Considerable loss or gain of weight	Yes/No
Insomnia or hypersomnia	Yes/No
Psychomotor agitation or retardation	Yes/No
Fatigue	Yes/No
Thoughts of extreme guilt	Yes/No
Diminished ability to think or concentrate	Yes/No
Suicidal thoughts	Yes/No
Willing to participate in trial and signing consent by fulfilling the conditions of proforma	Yes/No
Willing to give blood sample for analysis for laboratory investigations	Yes/No

If 8 - 10 criteria are positive, the patients will be included for the study.

EXCLUSION CITERIA:

Pregnancy and lactation	Yes/No
Diabetes mellitus	Yes/No
Psychosomatic disorders	Yes/No
Cardiac disease	Yes/No
Any other serious systemic illness	Yes/No

TRIAL

YES ☐ NO ☐
If Yes, OPD ☐ IPD ☐
Serial NO: ☐

Date:**Station:****Signature of the Investigator:****Signature of the Lecturer:****Signature of the HOD**

NATIONAL INSTITUTE OF SIDDHA
AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF SIRAPPU MARUTHUVAM

COMPARATIVE CLINICAL STUDY OF *THIRUTHARAKCHATHA CHOORANAM* (INTERNAL), *ARUGANVER THYLAM* (EXTERNAL) IN THE TREATMENT OF *VIYAGULA UNMATHAM* (DEPRESSION) WITH AND WITHOUT *YOGAM* THERAPY

Principal Investigator: Dr.S.Siva josyaa

FORM II-A – HISTORY TAKING PROFORMA

STUDY NO:	OP / IP NO:
NAME:	AGE / GENDER:
ADDRESS:	CONTACT NO:
	RELIGION: H / C / M / O.
OCCUPATION:	INCOME:
MARITAL STATUS: 1. Married	2. Unmarried
DATE OF INTIAL ASSESSMENT:	<input type="text"/>
COMPLAINTS & DURATION:	<input type="text"/>

PERSONAL HISTORY:

PERSONAL HABITS	YES	NO	IF YES SPECIFY DURATION	AMOUNT
Smoking				
Tobacco Chewing				
Alcohol				
Narcotic Drug Addiction				

HISTORY OF PREVIOUS ILLNESS AND TREATMENT TAKEN:**FAMILY HISTORY:**

Whether this problem runs in family?

1. Yes 2. No

1. _____

If yes, mention the relationship of affected
person(s)

2. _____

DIETARY STYLE:

1. Vegetarian 2. Non-vegetarian

MENSTRUAL AND OBSTETRIC HISTORY:**FORM II B**

S.NO	GENERAL EXAMINATION	BEFORE TREATMENT	AFTER TREATMENT
1	Body weight [Kg]		
2	Height [cms]		
3	Body Temperature [F]		

4	Blood Pressure (mm/Hg)		
5	Pulse Rate /min		
6	Heart Rate / min		
7	Respiratory Rate /min.		
8	Pallor		
9	Jaundice		
10	Clubbing		
11	Cyanosis		
12	Pedal Oedema		
13	Lymphadenopathy		
14	Jugular venous pulsation		
SYSTEMIC EXAMINATION			
1	Cardiovascular system		
2	Respiratory system		
3	Gastro-intestinal system		
4	Central Nervous system		
5	Urogenital system		
6	Endocrine system		

SIDDHA SYSTEM OF EXAMINATION

1. THEGI (BODY CONSTITUTION):

1. Vatha udal
2. Pitha udal
3. Kaba udal
4. Thontha udal

2. NILAM (LAND WHERE THE PATIENT LIVED MOST):

1. Kurinji (Hilly terrain)
2. Mullai (Forest range)
3. Marutham (Plains)
4. Neithal (Coastal belt)
5. Paalai (Aridregion)

3. KAALAM:

1. Kaar kaalam (Aavani-Purattasi)
2. Koothir kaalam (Ippasi-Kaarthigai)
3. Munpani kaalam (Maargazhi-Thai)
4. Pinpani kaalam (Maasi-Panguni)
5. Ilavenil kaalam (Chithirai-Vaigasi)
6. Muthuvenil kaalam (Aani-Aadi)

4. GUNAM:

1. Sathuvam
2. Rasatham
3. Thamasam

5. PORIPULANGAL (SENSORY ORGANS):

	Before treatment	After treatment
Mei (Skin)	Normal / Affected	Normal / Affected
Vai (Tongue)	Normal / Affected	Normal / Affected
Kann (Eye)	Normal / Affected	Normal / Affected
Mooku (Nose)	Normal / Affected	Normal / Affected
Sevi (Ear)	Normal / Affected	Normal / Affected

6.KANMENDRIYAM (MOTOR ORGANS) :

	Before treatment	After treatment
Kai (Upper limb)	Normal /Affected	Normal /Affected
Kaal (Lower limb)	Normal /Affected	Normal /Affected
Vai (Oral cavity)	Normal /Affected	Normal /Affected
Eruvai (Anal region)	Normal /Affected	Normal /Affected
Karuvai (Uro-Genital region)	Normal /Affected	Normal /Affected

7. KOSANGAL (SHEATH):

	Before treatment	After treatment
Annamaya kosam	Normal /Affected	Normal /Affected
Pranamaya kosam	Normal /Affected	Normal /Affected
Manomaya kosam	Normal /Affected	Normal /Affected
Vignanamaya kosam	Normal /Affected	Normal /Affected
Ananthamaya kosam	Normal /Affected	Normal /Affected

8. SEVEN UDAL THAATHUKKAL (SEVEN SOMATIC COMPONENTS)

	Before treatment	After treatment
Saaram	Normal /Affected	Normal /Affected
Senneer	Normal /Affected	Normal /Affected
Oon	Normal /Affected	Normal /Affected
Kozhuppu	Normal /Affected	Normal /Affected
Enbu	Normal /Affected	Normal /Affected
Moolai	Normal /Affected	Normal /Affected
Sukkilam / Suronitham	Normal /Affected	Normal /Affected

9. UYIR THAATHUKKAL: [THREE HUMORS] (VALI/ AZHAL/ IYYAM)

A) VALI

	1 st day	8 th day	15 th day	22 nd day	29 th day	36 th day	43 rd day	49 th day
Praanan								
Abaanan								
Samaanan								
Udhaanan								
Viyaanan								
Naagan								

Koorman								
Kirukaran								
Devathathan								
Dhananjeyan								

B) AZHAL

	1st day	8th day	15th day	22nd day	29th day	36th day	43rd day	49th day
Analakam								
Ranjakam								
Saathakam								
Prasakam								
Aalosakam								

C) IYYAM

	1st day	8th day	15th day	22nd day	29th day	36th day	43rd day	49th day
Avalambagam								
Kilethagam								
Pothagam								
Tharpagam								

Santhigam								
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10. ENVAGAI THERVU: [EIGHT TYPES OF EXAMINATION]

I. NAADI: [PULSE PERCEPTION]

NAADI	1st day	8th day	15th day	22nd day	29th day	36th day	43rd day	49th day

II. SPARISAM: [PALPATION]

Day	SPARISAM
1st day	
8th day	
15th day	
22nd day	
29th day	
36th day	
43rd day	
49th day	

III. NAA: [TONGUE]

NAA	1st day	8th day	15th day	22nd day	29th day	36th day	43rd day	49th day

IV. NIRAM: [COMPLEXION]

1. Vadham ☐
2. Pitham ☐
3. Kabam ☐

V. MOZHI: [VOICE]

1. High Pitched ☐
2. Low Pitched ☐
3. Medium Pitched ☐

VI. VIZHI: [EYES]

VIZHI	1 st day	8 th day	15 th day	22 nd day	29 th day	36 th day	43 rd day	49 th day

VII. MALAM: [BOWEL HABITS / STOOLS]

	Before treatment	After treatment
Niram		
Irugal		
Ilagal		
Others		

VIII. MOOTHIRAM [URINE EXAMINATION]**NEERKKURI:**

Neerkkuri	Before treatment	After treatment
Niram		
Manam		
Edai		
Nurai		
Enjal		

NEIKKURI:

Neikkuri	Before treatment	After treatment
Aravana neendathu/ Snake like pattern		
Azhipol paraviyathu Annular/Ringed pattern		
Muththothu ninrathu Pearl beaded pattern		
Other patterns		

Date:**Station:****Signature of the Investigator:****Signature of the Lecturer:****Signature of the HOD**

NATIONAL INSTITUTE OF SIDDHA
AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.

DEPARTMENT OF SIRAPPU MARUTHUVAM

COMPARATIVE CLINICAL STUDY OF *THIRUTHARAKCHATHA CHOORANAM* (INTERNAL), *ARUGANVER THYLAM* (EXTERNAL) IN THE TREATMENT OF *VIYAGULA UNMATHAM* (DEPRESSION) WITH AND WITHOUT YOGAM THERAPY.

Principal Investigator : Dr.S.Siva josyaa

1. SERIAL NO:

2. OP /IP NO:

3. NAME:

4. AGE/GENDER:

FORM-III - LABORATORY INVESTIGATIONS

BLOOD INVESTIGATION		NORMAL VALUES	BEFORE TREATMENT (WITH DATE)	AFTER TREATMENT (WITH DATE)
Hb(gm/dl)		M:12-15 W:11.5-14		
T.WBC (cells/cu.mm)		4000- 11000		
DIFFERENTIAL COUNT (%)	Polymorphs	40-75		
	Lymphocytes	20-40		
	Monocytes	2-10		
	Eosinophils	1-6		
	Basophils	0-1		

T.RBC(million cells/cu.mm)		M:4.0-5.5 W:3.5-4.5		
ESR(mm/hour)	½ hr.	M:6-12		
	1 hr.	W:7-18		
Blood Investigations		Normal Values	Before Treatment (WITH DATE)	After Treatment (WITH DATE)
Blood glucose (mg/dl)	Fasting	70-110		
	PP	80-140		
	Random	80-120		
RFT (mg/dl)	Blood urea	16-50		
	Serum creatinin e	0.6-1.2		

LFT (mg/dl)	Total bilirubin	0.2-1.2		
	Direct bilirubin	0.1-1.2		
	Indirect bilirubin	0.2-0.7		
	SGOT	0-40		
	SGPT	0-35		
	Alkaline phosphatase	80-290		
RA FACTOR				
CRP				
ASO TITRE				
THYROID PROFILE	T3	1.95- 5.40pg/ml		
	TSH	0.25- 5µIU/ml		

Urine investigation	Before Treatment (with Date)	After Treatment (With Date)
Neerkuri		
Niram		
Edai		
Manam		
Nurai		
Enjal		
Neikuri		
Albumin		
Fasting sugar		
PP sugar		
Deposits		

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer:

Signature of the HOD

NATIONAL INSTITUTE OF SIDDHA
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Principal Investigator: Dr.S.Siva josyaa

FORM –VI- DRUG COMPLIANCE FORM

SERIAL NO:

NAME:

DRUG NAME:

On 1st day-Date: Drugs issued: (gms) Drugs returned: (gms)
 On 8th day-Date: Drugs issued: (gms) Drugs returned: (gms)
 On 15th day-Date: Drugs issued: (gms) Drugs returned: (gms)
 On 22th day-Date: Drugs issued: (gms) Drugs returned: (gms)
 On 29th day-Date: Drugs issued: (gms) Drugs returned: (gms)
 On 36th day-Date: Drugs issued: (gms) Drugs returned: (gms)
 On 43th day-Date: Drugs issued: (gms) Drugs returned: (gms)

Day	Date	Morning	Evening	Day	Date	Morning	Evening
Day 1				Day25			
Day2				Day26			
Day3				Day27			
Day4				Day28			
Day5				Day29			
Day6				Day30			
Day7				Day31			
Day8				Day32			
Day9				Day33			
Day10				Day34			
Day11				Day35			

Day12				Day36			
Day13				Day37			
Day14				Day38			
Day15				Day39			
Day16				Day40			
Day17				Day41			
Day18				Day42			
Day19				Day43			
Day20				Day44			
Day21				Day45			
Day22				Day46			
Day23				Day47			
Day24				Day 48			

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer:

Signature of the HOD

NATIONAL INSTITUTE OF SIDDHA
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DEPARTMENT OF SIRAPPU MARUTHUVAM

COMPARATIVE CLINICAL STUDY OF THIRUTHARAKCHATHA *CHOORANAM* (INTERNAL), ARUGANVER *THYLAM* (EXTERNAL) IN THE TREATMENT OF *VIYAGULA UNMATHAM* (DEPRESSION) WITH AND WITHOUT *YOGAM* THERAPY

Principal Investigator : Dr.S.Siva josyaa

FORM V– PATIENT INFORMATION SHEET

Name of Principal Investigator: Dr.S.Siva josyaa

Guide: Dr.N.J.Muthukumar

Name of the institute: National Institute of Siddha,
Tambaram Sanatorium, Chennai-47.

INFORMATION SHEET FOR PATIENTS PARTICIPATING IN THE CLINICAL TRIAL.

I, **Dr.S.Siva josyaa** studying M.D (Siddha) at National Institute of Siddha, Tambaram Sanatorium is doing a trial on '***VIYAGULA UNMATHAM*** (DEPRESSION). It is a most common dermatological problem, occurring throughout the world. In this regard, I am in a need to ask you few questions. I will maintain confidentiality of your comments and data obtained. There will be no risk of disclosing your identity and no physical, psychological or professional risk is involved by taking part in this study. Taking part in this study is voluntary. No compensation will be paid to you for taking part in this study.

You can choose not to take part. You can choose not to answer a specific question. There is no specific benefit for you if you take part in the study. However, taking part in the study may be of benefit to the community, as it may help us to understand the problem of defaulters and potential solutions.

If you agree to be a participant in this study, you will be included in the study primarily by signing the consent form and then you will be given the internal medicine "***THIRUTHARATCHATHA CHOORANAM*** (INTERNAL MEDICINE), 2gm bds,

ARUGANVER THYLAM (EXTERNAL MEDICINE) for 48 days. The information I am collecting in this study will remain between you and the principal investigator (myself). I will ask you few questions through a questionnaire. I will not write your name on this form. Your name won't be mentioned in the lab investigation form instead a code will be used.

The questionnaire will take approximately 20 minutes of your time.

If you want to know more about this study before taking part, you can ask me all the questions you want or contact Dr.S.SIVA JOSYAA, PG Scholar cum principal investigator of this study, National Institute of Siddha, Chennai-47, Ph no 9677454003. You can also contact the Member-secretary of Ethical committee, National Institute of Siddha, Chennai 600047, Tel.No: 91-44-22380789, for rights and participation in the study.

தகவல் படிவம்

தேசிய சித்த மருத்துவ நிறுவனம், சென்னை 47

அயோத்திதாஸ் பண்டிதர் மருத்துவமனை, சென்னை.

வியாகூல உன்மாதம் (மன அழுத்தம்) நோயிக்கான சித்த மருந்துகளில் திருதராட்சத சூரணம் (உள் மருந்து) மற்றும் அருகன்வேர் தைலம் (வெளி மருந்து) பரிகரிப்புத் திறனைக் கண்டறியும் மருத்துவ ஆய்விற்கான தகவல் படிவம்

முதன்மை ஆராய்ச்சியாளர் பெயர்:: மருத்துவர் செ. சிவ ஜோஸ்யா

நிறுவனத்தின் பெயர் : தேசிய சித்த மருத்துவ நிறுவனம்,
தாம்பரம் சானட்டோரியம், சென்னை 47

தேசிய சித்த மருத்துவ நிறுவனத்தில் பட்ட மேற்படிப்பு பயின்று வரும் நான் மருத்துவர். வியாகூல உன்மாதம் (மன அழுத்தம்) நோயில் மருத்துவ ஆராய்ச்சியில் ஈடுபட்டுள்ளேன்.

இது பரவ கூடிய நோய் அல்ல. இந்த ஆராய்ச்சி சம்பந்தமாக சில கேள்விகளை கேட்கவும், தேவையான ஆய்வக பரிசோதனைக்கு தங்களை உட்படுத்தவும் உள்ளேன்.

இது சம்பந்தமான தங்களது அனைத்து விவரங்களும் ரகசியமாக வைக்கப்படும் என உறுதி அளிக்கிறேன். இதில் பயணப்படி முதலிய எந்த உதவித் தொகையும் வழங்கப் பட மாட்டாது.

இந்த ஆராய்ச்சியின் போது உடலுக்கு வேறு பாதிப்பு ஏற்படும் பட்சத்தில் தேசிய சித்த மருத்துவமனையில் தக்க சிகிச்சை அளிக்கப்படும்.

இந்த ஆராய்ச்சிக்கு தாங்கள் விருப்பத்தின் பேரில் உட்படும் பட்சத்தில் உள்மருந்தாக திருதராட்சத சூரணம் (உள் மருந்து) 1கி 2 வேளை (காலை, மாலை) உணவுக்குப் பின் 48 நாட்கள் உட்கொள்ள வேண்டும் மற்றும் அருகன்வேர் தைலம் (வெளி மருந்து) 48 நாட்கள்

வெளிப்பிரயோகமாக பயன்படுத்த வேண்டும். வெளிநோயாளர்கள் 7 நாட்களுக்கு ஒருமுறை மருத்துவமனைக்கு வரவேண்டும்.

இந்த ஆராய்ச்சியில் நோயினராக சேர்ந்த பிறகு உங்களுக்கு விருப்பம் இல்லையெனில் எப்போது வேண்டுமானாலும் விலகி கொள்ளலாம்.

இந்த ஆராய்ச்சி சம்பந்தமாக மற்ற விபரங்களுக்கும் நோயின் தன்மை பற்றியும் முதன்மை ஆராய்ச்சியாளரான மருத்துவர் செ. சிவ ஜோஸ்யா (பட்ட மேற் படிப்பாளர் சிறப்பு மருத்துவ துறை) அணுகவும். கைப்பேசி எண் 9677454003

மேலும் இந்த ஆராய்ச்சிக்கு IEC சான்று பெறப்பட்டுள்ளது. இந்த மருந்து திருதராட்சத சூரணம் (உள் மருந்து) மற்றும் அருகன்வேர் தைலம் (வெளி மருந்து) சிறப்பாக அங்கீகரிக்கப்பட்ட சித்த மருத்துவ நூலில் கூறப்பட்டுள்ளது. ஏற்கனவே உபயோகத்தில் உள்ள இது போன்ற மருந்து இதுவரை நோயாளிகளிடம் எந்த வித பக்க விளைவுகளையும் ஏற்படுத்தவில்லை. மேலும் உணவு முறையில் மருத்துவரால் கூறப்படும் பத்தியம் காக்குமாறு அறிவுறுத்தப்படுகிறது.

**NATIONAL INSTITUTE OF SIDDHA
AYOTHIDOSS PANDITHAR HOSPITAL, CHENNAI – 600 047.**

DEPARTMENT OF SIRAPPU MARUTHUVAM

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Principal Investigator : Dr.S.Siva josyaa

FORM-V – INFORMED CONSENT FORM

“I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction.

I consent voluntarily to participate as a participant in this study and understand that I have the right to withdraw from the study at any time without in any way it affecting my further medical care”.

"I have received a copy of the information sheet/consent form".

Date:

Signature of the participant

In case of illiterate participant

“I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm individual has given consent freely.”

Date:

Signature of a witness

(Selected by the participant bearing no connection with the survey team)



Left thumb Impression of the Participant

FORM VI ஒப்புதல் படிவம்

ஆய்வாளரால் சான்றளிக்கப்பட்டது

நான் வியாகூல உன்மாதம் (மன அழுத்தம்) என்னும் நோயின் ஆய்வைக் குறித்த அனைத்து விபரங்களையும் நோயாளிக்குப் புரியும் வகையில் எடுத்துரைத்தேன் என உறுதியளிக்கிறேன்.

தேதி:

கையொப்பம்:

இடம்:

பெயர்:

நோயாளியின் ஒப்புதல்

என்னிடம் இந்த மருத்துவ ஆய்வின் காரணத்தையும், மருந்தின் தன்மை மற்றும் மருத்துவ வழிமுறை பற்றியும், தொடர்ந்து எனது உடல் இயக்கத்தைக் கண்காணிக்கவும், அதனைப் பாதுகாக்கவும் பயன்படும் மருத்துவ ஆய்வுக்கூட பரிசோதனைகள் பற்றி திருப்தி அளிக்கும் வகையில் ஆய்வு மருத்துவரால் விளக்கிக் கூறப்பட்டது.

நான் இந்த மருத்துவ ஆய்வின் போது, எப்பொழுது வேண்டுமானாலும் இந்த ஆய்விலிருந்து என்னை விடுவித்து கொள்ளும் உரிமையைத் தெரிந்திருக்கின்றேன்.

நான் என்னுடைய சுதந்திரமாகத் தேர்வு செய்யும் உரிமையைக் கொண்டு வியாகூல உன்மாதம் (மன அழுத்தம்) நோய்க்கான திருதராட்சத சூரணம் (உள் மருந்து) மற்றும் அருகன்வேர் தைலம் (வெளி மருந்து) மருந்தின் பரிகரிப்புத் திறனைக் கண்டறியும் மருத்துவ ஆய்விற்கு என்னை உட்படுத்த ஒப்புதல் அளிக்கிறேன்.

தேதி:

கையொப்பம்:

இடம்:

பெயர்:

சாட்சிக்காரர்கையொப்பம்:

பெயர்:

உறவுமுறை:

விரிவுரையாளர் கையொப்பம்:

துறைத்தலைவர் கையொப்பம்:

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Principal Investigator : Dr.S.Siva josyaa

FORM VII -A- WITHDRAWAL FORM

1. SERIAL NO OF THE CASE:

2. OP / IP NO:

3. NAME:

4.AGE:

5.GENDER:.....

6. DATE OF TRIAL COMMENCEMENT:

7. DATE OF WITHDRAWAL FROM TRIAL:

8. REASONS FOR WITHDRAWAL:

Long absence at reporting: Yes/ No

Irregular treatment: Yes/ No

Shift of locality: Yes/No

Increase in severity of symptoms: Yes/No

Development of severe adverse drug reactions: Yes/No

Development of adverse event: Yes/No

(If YES, give the details of adverse reaction in Form VII -B – Adverse
Reaction Form / Pharmacovigilance Form)

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer:

Signature of the HOD

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Principal Investigator : Dr.S.Siva josyaa

சேர்க்க கூடிய உணவுகள்:

காய்கள்:

முருங்கைபிஞ்சு,
அவரைபிஞ்சு,
பிரண்டை,
காரட்,
பீட்டூட்.

கீரைகள்:

கரிசாலை,
பொன்னாங்கண்ணி,
மணத்தக்காளி,
முருங்கைகீரை,
பசலைகீரை,
சிறுகீரை,
கறிவேப்பிலை,
கொத்தமல்லி.
புதினா.

பழங்கள்:

மாதுளை,
ஆப்பிள்,
வாழை,
பேர்ச்சை,
அத்தி,
திராட்சை,
கொய்யா
நாவல்,
சப்போட்டா & உலர் திராட்சை.

தானியங்கள்

முளை கட்டிய பயிர் வகைகள்,
சோயாபீன்ஸ்,
வெந்தயம்.

அசைவம்:

வெள்ளாட்டுகறி ஈரல்,
எலும்பு மஜ்ஜை,

மற்றவை:

பனை வெல்லம்
பால்

தவிர்க்க வேண்டியவைகள்:

கோழிக்கறி, மீன், நண்டு, கருவாடு,
வேர்க்கடலை,
எள்ளு,
பப்பாளி,
அன்னாசி,
நல்லெண்ணெய்,
புளிப்பு பொருள்கள்,
எலுமிச்சை,
தக்காளி,
புளிப்பு தயிர் மோர்,
ஊறுகாய்,
பெண்போகம், புகையிலை ,
வெற்றிலை,பாக்கு.

THE HAMILTON RATING SCALE FOR DEPRESSION

SERIAL NO:

OP/IP NO

NAME

AGE:

GENDER:

To rate the severity of depression in patients who are already diagnosed as depressed, administer this questionnaire. The higher the score, the more severe the depression.

For each time, write the correct number on the line next to the item. (Only one response per item)

1.DEPRESSED MOOD (Sadness, hopeless, helpless, worthless)

0 = Absent

1 = These feeling states indicated only on questioning

2 = These feeling states spontaneously reported verbally

3 = Communicates feeling states non- verbally- i.e., through facial expression, posture, voice and tendency to weep

4 = Patient reports virtually only these feeling states in his spontaneous verbal and non verbal communication

2.FEELINGS OF GUILT

0 = Absent

1 = Self reproach, feels he has let people down

2 = Ideas of guilt or rumination over past errors or sinful deeds

3 = Present illness is a punishment. Delusions of guilt

4 = Hears accusatory or denunciatory voices and/ or experiences threatening visual hallucinations

3.SUICIDE

0= Absent

1= Feels life is not worth living

2= Wishes he were dead or any thoughts of possible death to self

3= Suicidal ideas or gesture

4= Attempts at suicide (any serious attempt rates 4)

4.INSOMIA EARLY

0= No difficulty falling asleep

1= Complaints of occasional difficulty falling asleep- i.e., more than ½ hour

2= Complaints of nightly difficulty falling asleep

5.INSOMIA MIDDLE

0 = No difficulty falling asleep

1 = Patient complaints of being restless and disturbed during the night

2 = Walking during the night – any getting out of bed rates 2 (except for purposes of voiding)

6.INSOMIA LATE

0= No difficulty

1= Waking in early hours of the morning but goes back to sleep

2= Unable to fall asleep again if he gets out of bed

7.WORK AND ACTIVITIES

0 = No difficulty

1 = Thoughts and feelings of incapacity, fatigue or weakness related to activities: work or hobbies

2 = Loss of interest in activity: hobbies or work- either directly reported by patient or indirect in listlessness, indecision and vacillation (feels he has to push self to work or activities)

3= Decrease in actual time spent in activities or decrease in productivity

4=Stopped working because of present illness

8.RETARDATION: PSYCHOMOTOR (Slowness of thought and speech: impaired

ability to concentrate: decreased motor activity)

0= Normal speech and thought

1= Slight retardation at interview

2= Obvious retardation at interview

3= Interview difficult

4= Complete stupor

9.AGITATION

0= None

1= Fidgetiness

2= Playing with hands, hair, etc

3= Moving about, can't sit still

4= Hand wringing, nail biting, hair pulling, biting of lip

10.ANXIETY (PSYCHOLOGICAL)

0= No difficulty

1= Subjective tension and irritability

2= Worrying about minor matters

3= Apprehensive attitude apparent in face or speech

4= Fears expressed without questioning

11.ANXIETY SOMATIC: Physiological concomitants of anxiety, (i.e., effects of autonomic overactivity, "butterflies," indigestion, stomach cramps, belching, diarrhoea, palpitations, hyperventilation, paresthesia, sweating, flushing, tremor, headache, urinary frequency). Avoid asking about possible medication side effects(i.e., dry mouth, constipation)

0 = Absent

1 = Mild

2 = Moderate

3 = Severe

12.SOMATIC SYMPTOMS (GASTROINTESTINAL)

0 = None

1 = Loss of appetite but eating without encouragement from others. Food intake about normal

2 = Difficulty eating without urging from others. Marked reduction of appetite and food Intake

13.SOMATIC SYMPTOMS GENERAL

0 = None

1 = Heaviness in limbs, back or head. Backaches, headache, muscle aches. Loss of energy and fatigability

2= Any clear- cut symptom rates 2

14.GENITAL SYMPTOMS (Symptoms such as: loss of libido; impaired sexual performance; menstrual disturbances)

0= Absent

1= Mild

2= Severe

15.HYPOCHONDRIASIS

0= Not present

1= Self – absorption (bodily)

2= Preoccupation with health

3= Frequent complaints, requests for help, etc

4= Hypochondrial delusions

16.LOSS OF WEIGHT

A. When rating by history:

0 = No weight loss

1 = Probably weight loss associated with present illness

2 = Definite(according to patient) weight loss

17.INSIGHT

0 = Acknowledges being depressed and ill

1 = Acknowledges illness but attributes causes to bad food, climate, overwork, virus, need for rest, etc.

2= Denies being ill at all

18.DIURNAL VARIATION

A. Note whether symptoms are worse in morning or evening. If NO diurnal variation, mark none

0 = No variation

1 = Worse in A.M.

2 = Worse in P.M.

B. When present, mark the severity of the variation. Mark “None” if NO variation

0= None

1= Mild

2=Severe

19.DEPERSONALIZATION AND DECREALIZATION (Suchas: Feelings of unreality: Nihilistic ideas)

- 0 = Absent
- 1 = Mild
- 2 = Moderate
- 3 = Severe

20.PARANOID SYMPTOMS

- 0= None
- 1= Suspicious
- 2= Ideas of reference
- 3= Delusions of reference and persecution

21.OBSESSIONAL AND COMPULSIVE SYMPTOMS

- 0 = Absent
- 1 = Mild
- 2 = Severe

Total score _____

HAM- D Scoring Instructions:

Sum the scores from the first 17 items.

- 0-7 = Normal
- 8-13 = Mild Depression
- 14-18 = Moderate Depression
- 19-22 = Severe Depression
- ≥ 23 = Very Severe Depression

Date:

Station:

Signature of the Investigator:

Signature of the Lecturer:

Signature of the HOD



NATIONAL INSTITUTE OF SIDDHA- राष्ट्रीय सिद्ध संस्थान

Ministry of AYUSH- आयुष मंत्रालय

GOVERNMENT OF INDIA-भारत सरकार

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वेब : www.nischennai.org

F.No.NIS/6-20/IEC/15-16

Dt: 14.10.2016

CERTIFICATE

Address of Ethics Committee: National Institute of Siddha, Tambaram Sanatorium, Chennai-600047, Tamil Nadu, India	
Principal Investigator: Dr. S.Siva Josyaa – I year, Dept.of Sirappu Maruthuvam	
Protocol Title:- Comparative clinical study of Thirutharakchatha Chooranam (Internal), Aruganver thylam (External) in the treatment of Viyagula unmatham (Depression) with and without yogam therapy.	
Documents filed	1) Protocol, 2) Data Collection forms
Clinical trial Protocol (others – Specify)	Yes-(M.D-Dissertation)
Informed consent documents	Yes
Any other documents	-
Date of IEC approval & its number	NIS/IEC/2016/11-12/ 14.10.2016

We approve the trial to be conducted in its presented form.

The Institutional Ethics Committee expects to be informed about the progress of the study, any SAE occurring in the course of the study.

(Dr.V.Subramanian)
Chairman



(Prof.Dr.V.Banumathi)
Member Secretary



The Tamil Nadu Dr. M.G.R. Medical University

69, Anna Salai, Guindy, Chennai - 600 032.

This Certificate is awarded to Dr/Mr/Mrs.....**SIVAJAYAA.S**.....

For participating as ~~Resource Person~~ / Delegate in the Twenty First Workshop on

“RESEARCH METHODOLOGY & BIOSTATISTICS”

For AYUSH Post Graduates & Researchers

Organized by the Department of Siddha

The Tamil Nadu Dr. M.G.R. Medical University From 25th to 29th April 2016.


Dr. N. KABILAN, MD(S),
PROF & HEAD
DEPT. OF SIDDHA


Prof. **Dr. P. ARUMUGAM**, M.D.,
REGISTRAR i/c


Prof. **Dr. S. GEETHALAKSHMI**, M.D., Ph.D.,
VICE CHANCELLOR

NATIONAL INSTITUTE OF SIDDHA, CHENNAI - 600047

BOTANICAL CERTIFICATE

Certified that the following plant drugs used in the Siddha formulation "Thirutharakchatha chooranam" (Internal) and "Aruganver Thylam" (External) taken up for Post Graduation Dissertation studies by Dr.S.SivaJosyaa M.D.(S), III year, Department of Sirappu Maruthuvam, 2018, are identified through Visual inspection, Experience, Education & Training, Organoleptic characters, Morphology and Taxonomical methods as

- Anacardium occidentale* (Anacardiaceae), Nut
Phoenix dactylifera Linn. (Arecaceae), Dried fruit
Glycyrrhiza glabra Linn. (Fabaceae), Root
Elettaria cardamomum Maton (Zingiberaceae), Seed
Piper longum Linn. (Piperaceae), Fruit
Oryza sativa Linn. (Poaceae), Flattened Seed
Syzygium aromaticum (Linn.) Merr. & L.M. Perry (Myrtaceae), Flower bud
Cinnamomum tamala Nees & Eberm. (Lauraceae), Leaf
Plumbago zeylanica Linn. (Plumbaginaceae), Root
Maranta aurundinacea Linn. (Marantaceae), Rhizome
Cyperus rotundus Linn. (Cyperaceae), Tuber
Tephrosia spinosa Pers. (Fabaceae), Root
Piper nigrum Linn. (Piperaceae), Fruit
Coriandrum sativum Linn. (Apiaceae), Fruit
Cynodon dactylon (Linn.) Pers. (Poaceae), Root
Psoralea corylifolia Linn. (Fabaceae), Seed
Vetiveria zizanoides (Linn.) Nash (Poaceae), Root
Costus speciosus (Koen.) Sm. (Costaceae), Root
Sesamum indicum Linn. (Pedaliaceae), Seed oil



Certificate No: NISMB3382018

Date: 22-06-2018

Authorized Signatory

Dr. D. ARAVIND, M.D.(s), M.Sc.,
Assistant Professor
Department of Medicinal Botany
National Institute of Siddha
Chennai - 600 047, INDIA



Clinical Trial Details (PDF Generation Date :- Sat, 28 Apr 2018 18:01:59 GMT)

CTRI Number	CTRI/2018/04/013421 [Registered on: 23/04/2018] - Trial Registered Prospectively	
Last Modified On	18/04/2018	
Post Graduate Thesis	Yes	
Type of Trial	Interventional	
Type of Study	Siddha	
Study Design	Single Arm Trial	
Public Title of Study	Comparative clinical study of Thirutharakchatha chooranam (internal) and Aruganver thylam (external) in the treatment of viyagula unmatham (Depression) with and without yogam	
Scientific Title of Study	Comparative clinical study of Thirutharakchatha chooranam (internal) and Aruganver thylam (external) in the treatment of viyagula unmatham with and without yogam	
Secondary IDs if Any	Secondary ID	Identifier
	NIL	NIL
Details of Principal Investigator or overall Trial Coordinator (multi-center study)	Details of Principal Investigator	
	Name	Dr S Siva josyaa
	Designation	PG scholar
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	Phone	9677454003
	Fax	
	Email	drjosyaaselvam93@gmail.com
Details Contact Person (Scientific Query)	Details Contact Person (Scientific Query)	
	Name	Dr N J Muthu kumar
	Designation	The Head of the department
	Affiliation	National Institute of Siddha
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Details Contact Person (Public Query)	Details Contact Person (Public Query)	
	Name	Dr N J Muthu kumar
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Source of Monetary or Material Support	Source of Monetary or Material Support			
	> National Institute Of Siddha Tambarum sanatorium kancheepuram			
Primary Sponsor	Primary Sponsor Details			
	Name	Ayothidoss Pandithar Hospital		
	Address	National Institute of Siddha Tambarum sanatorium Chennai 47		
	Type of Sponsor	Research institution and hospital		
Details of Secondary Sponsor	Name	Address		
	NIL	NIL		
Countries of Recruitment	List of Countries			
	India			
Sites of Study	Name of Principal Investigator	Name of Site	Site Address	Phone/Fax/Email
	Dr S Siva josyaa	National Insitute of Siddha	Tambarum sanatorium Chennai 47 Kancheepuram TAMIL NADU	9677454003 drjosyaaselvam93@gmail.com
Details of Ethics Committee	Name of Committee	Approval Status	Date of Approval	Is Independent Ethics Committee?
	National Institute of Siddha	Approved	14/10/2016	Yes
Regulatory Clearance Status from DCGI	Status		Date	
	Not Applicable		No Date Specified	
Health Condition / Problems Studied	Health Type		Condition	
	Patients		PEOPLE IN DEPRESSED MOOD BUT SHOULD BE IN GOOD ORIENTATION	
Intervention / Comparator Agent	Type	Name	Details	
	Intervention	Thirutharakchatha chooranam internally and Aruganver thylam externally	Thirutharakchatha chooranam 2 gm twice a day with Ghee Q S and Aruganver thylam for oil bath twice a week for 48 days	
	Comparator Agent	yogam	1 pranayamam 2 santhi asanam 3 bhavana mukthasanam 4 sarvangasanam 5 surya namaskaram patients should practice these yogasanams for 48 days.	
Inclusion Criteria	Inclusion Criteria			
	Age From	20.00 Year(s)		
	Age To	55.00 Year(s)		
	Gender	Both		
	Details	1 Depressed mood 2 Reduced level of interest 3 Considerable loss or gain of weight 4 Insomnia or hypersomnia 5 Psychomotor agitation or retardation 6 Fatigue 7 Thoughts of extreme guilt 8 Diminished ability to think or concentrate 9 Suicidal thoughts 10 Willing to participate in trial and signing consent by fulfilling the conditions of proforma		



	11 Willing to give blood sample for analysis for laboratory investigations				
Exclusion Criteria	<table> <tr> <th colspan="2">Exclusion Criteria</th></tr> <tr> <td>Details</td><td> 1 Pregnancy and lactation 2 diabetes mellitus 3 psychosomatic disorder 4 cardiac diseases 5 any other systemic illness </td></tr> </table>	Exclusion Criteria		Details	1 Pregnancy and lactation 2 diabetes mellitus 3 psychosomatic disorder 4 cardiac diseases 5 any other systemic illness
Exclusion Criteria					
Details	1 Pregnancy and lactation 2 diabetes mellitus 3 psychosomatic disorder 4 cardiac diseases 5 any other systemic illness				
Method of Generating Random Sequence	Not Applicable				
Method of Concealment	Case Record Numbers				
Blinding/Masking	Open Label				
Primary Outcome	<table> <tr> <th>Outcome</th><th>Timepoints</th></tr> <tr> <td>Reduction in the symptoms of Depression.</td><td>45 days</td></tr> </table>	Outcome	Timepoints	Reduction in the symptoms of Depression.	45 days
Outcome	Timepoints				
Reduction in the symptoms of Depression.	45 days				
Secondary Outcome	<table> <tr> <th>Outcome</th><th>Timepoints</th></tr> <tr> <td>To enhance the good health.</td><td>48 days</td></tr> </table>	Outcome	Timepoints	To enhance the good health.	48 days
Outcome	Timepoints				
To enhance the good health.	48 days				
Target Sample Size	Total Sample Size=30 Sample Size from India=30				
Phase of Trial	Phase 2				
Date of First Enrollment (India)	25/04/2018				
Date of First Enrollment (Global)	No Date Specified				
Estimated Duration of Trial	Years=1 Months=0 Days=0				
Recruitment Status of Trial (Global)	Not Applicable				
Recruitment Status of Trial (India)	Not Yet Recruiting				
Publication Details	not yet				
Brief Summary	<p>A depressive disorder is a syndrome (group of symptoms) that reflects a sad and/or irritable mood exceeding normal sadness or grief. More specifically, the sadness of depression is characterized by a greater intensity and duration and by more severe symptoms and functional disabilities than is normal.</p> <p>Depressive disorders are a huge public-health problem, due to its affecting millions of people. About 10% of adults, up to 8% of teens and 2% of preteen children experience some kind of depressive disorder.</p> <p>Siddha system of medicine has mentioned a lot about Mana noigal like Madha azivu, Madha noi, Kirigai, Unmadham. Siddhars also had mentioned about the treatment aspects for Mana noigal. The symptoms of mana noigal include hallucinations, lack of interest in all activities, fatigue,</p>				



depressed mood, insomnia etc.

This is the largest population-based study from India to report on prevalence of depression and shows that among urban south Indians, the prevalence of depression was 15.1%. Age, female gender and lower socio-economic status are some of the factors associated with depression in this population. The overall prevalence of depression was 15.1% (age-adjusted, 15.9%) and was higher in females (females 16.3% vs. males 13.9%, $p < 0.0001$). The odds ratio (OR) for depression in female subjects was 1.20 [Confidence Intervals (CI): 1.12–1.28, $p < 0.001$] compared to male subjects. Depressed mood was the most common symptom (30.8%), followed by tiredness (30.0%) while more severe symptoms such as suicidal thoughts (12.4%) and speech and motor retardation (12.4%) were less common.

Every month, about 7 to 9 patients report to OPD Of Ayothidoss Pandithar Hospital, National Institute of Siddha, Tambaram sanatorium, Chennai-47. In the Modern era, Depression is a major problem among people. We feel that THIRUTHARATCHATHA CHOORANAM AND ARUGANVER THYLAM will reduce the symptoms of Depression and it is cost effective too.

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